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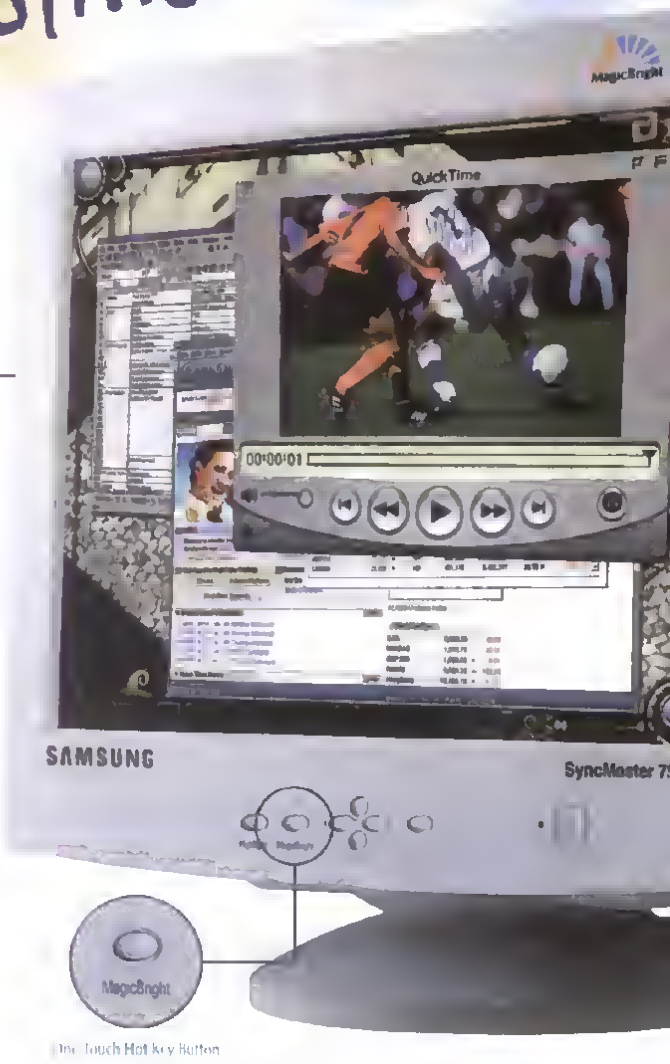

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Tokyo tech

The pilgrimage to Electric Town was less than I had anticipated, but more than I could have ever imagined. Less because I had often heard that in Japan, and particularly in the Akihabara district of Tokyo (aka Electric Town), I would see technology products for sale that would not be found in North America for at least a couple of years.

There were some examples of that fabled one step ahead technology. For example, CRT-based monitors are virtually nonexistent. TFT monitors are the norm, and the latest versions are wide screen models that also serve as TV sets. PCs themselves seem to be morphing into Internet centric home entertainment centres. Broadband content development seems at least a generation ahead of North America, and in one store I saw a wall of about 20 monitors displaying examples of streaming services.

Another example of leading technology is cellular service. While North America is taking baby steps with 2.5G cellular service, 3G has been available in Tokyo since October (although I've been told that consumer uptake has been disappointing). And text-chat and short messaging over wireless phones has reached a high art in Tokyo.

But to a large extent, globalization appears to have been a big equalizer. Multinationals develop for a world market, which means that the various regions get new products at roughly the same time. So, the latest MiniDisc recorders, MP3 players, digital cameras, and personal computer equipment I saw there were pretty much the same as what you'd find in Canadian retail stores.

Store after multi-level store is filled with nothing but computers and computer-related peripherals and accessories.

There were some differences in product offerings, but this mainly reflects the Asian market's different taste for products. An example of this is the large numbers of fly-weight (about 1 kg) notebooks available for purchase. Historically, this category has been more popular in Asia than in North America. There are also differences in brand visibility, but again this seems to be due to regional market variations. Sony is a case in point. It has just a minor part of the PC market here, but is the leading brand in Japan, with a 33 percent market share, according to the Japanese computer trade publication, *Business Computer News*.

All this is not to say that it is a market that's largely the same—au contraire. I mentioned that my visit to Electric Town was also more than I could have imagined, and that was due to the sheer scale of retail activity. When you pack the equivalent of most of Canada's population into a single metropolitan area, things happen that would not otherwise be possible.

The Akihabara district is one result. Store after multi level store is filled with nothing but computers and computer-related peripherals and accessories. Scores of magazines are devoted to some aspect of personal computing (including one called, roughly translated, "PCs for Housewives" with a circulation of 80,000). Do-it-yourself computer stores have huge inventories—I counted several dozen motherboard cartons in one store, stacked on shelves like dry goods in a grocery store.

Across town, for several blocks around the Shinjuku subway station, is a second mecca for digital technology products. This area has long been known as a retail centre for photography, with many camera shops concentrated there. They've gone into digital in a big way, and I found multi-floor stores with digital cameras on one floor, 35-mm on another, medium and large format cameras on another, film, paper, and other developer chemicals on yet another, etc. Some of these stores have branched into other digital products too, for example handheld computers and MP3 players. And one department store I walked into also had a large part of one floor devoted to personal computers and accessories.

I came away from the experience not feeling at all digitally deprived. In terms of selection of products, we have it pretty good here; pricing is also not too different, although it can vary substantially, depending on the product in question. And ironically, the Handspring Treo I had with me caused a bit of stir among a couple of ad agency folks I showed it to. They'd never seen the device before—imagine that.

Enjoy the issue!
David Tanaka, Editor

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Why HP wanted Compaq

Fiorina says customers are in control of industry

Now that Compaq has officially been acquired by Hewlett-Packard, it's worth taking a few minutes to look at where this deal came from—and what it really means to us, the humble computer users. From a historical perspective, the deal marks the end of an era in which anything seemed possible.

Compaq was born during the initial personal computer boom back in 1982. At that time, I was lucky enough to meet the people involved in founding the company (financier and longtime chairman Ben Rosen, co-founder and former chief executive officer Rod Canion, and co-founder Bill Murtlo) and there was no indication back then that this venture would turn into anything like a $30 billion company. They had a good idea for an IBM-compatible computer that could be transported from place to place. That idea took hold in the absence of anything as innovative coming from IBM itself.

And that's where the current merger with HP comes in. Compaq was born out of a desire to innovate—but not too radically. Canion and Rosen always talked about "innovation around standards," which was really another form of Microsoft co-founder Bill Gates's much-vaunted "embrace and extend" idea (wherein Microsoft would embrace new standards, then extend them by optimizing those standards for Windows and Microsoft Office).

> Canion and Rosen always talked about "innovation around standards," which was really another form of Microsoft co-founder Bill Gates's much-vaunted "embrace and extend" idea.

Enter HP chief executive officer, Carly Fiorina, who has used innovation as her rallying cry and touchstone since she succeeded John Young as head of HP. At first blush, the notion of acquiring Compaq, removing duplication and blending product lines doesn't seem very innovative. It's a classic strategy that sometimes works—and has often failed. After all, who remembers Unisys these days (born of the Sperry and Burroughs merger) or Borland (which sank to near death following its acquisition of Ashton Tate)?

That appears to be missing the point, however. At the Accenture Global Convergence Forum in Monte Caslo in April, only weeks prior to final approval of the merger, Fiorina spoke passionately about her reasons for pursuing this deal and they sounded more innovative than you might think.

She started by referencing the House of Grimaldi, the ruling family of the Principality of Monaco (of which Prince Rainer is the head of state). It has maintained control of the tiny Mediterranean country for something like 1,000 years, amidst a great deal of change and turmoil throughout the rest of Europe.

Fiorina said that the computer industry's House of Grimaldi resides in its customers. She suggested that, despite appearances to the contrary, customers have really always been in charge of the industry's destiny. The problem has been that the computer industry hasn't always recognized that fact.

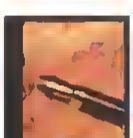
"We are not driving the tech agenda, you and your customers are driving it," she told an audience full of chief and senior executives from some of the world's largest IT, telecommunications, and media companies. "There is a shift in vision and point of view: it is now your vision and not ours. In this industry, you are the centre. It is a tectonic shift and a vital shift."

Fiorina talked about how this perceptional shift had a lot to do with why she pursued this merger so aggressively and the questions she had to ask within HP as a result. These are questions that resonate within the PC industry as a whole: the days of double digit growth are gone.

"What does the future hold for tech companies tuned to 40 to 60 percent growth rates? Where will growth come from as companies come to grips with this? What type of tech company do we want to be?" she asked.

Fiorina also credits the computer industry with helping to create a more global economy, and speculated as to whether the industry was now structured in a way that it could serve the needs of what it helped create.

"The age of globalization has come from this democratization of technology and that is why bold moves are necessary," she concluded. "People will seek out the companies that deliver what they need, companies that will narrow their focus and specialize. We knew we could lead the trend or be swallowed up by it, and by merging we become a leader." ❑



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I'm in the market for a budget-priced, good-performing computer. I've noticed that some of your advertisers are selling what appears to be a good bundle with a VIA 1 Giga Pro processor (PCchips 7B3). What is a VIA Giga Pro? I haven't seen or read anything about this. Can you shed some light on this value-priced computer (processor)?

Mark Cheung

Sean Carruthers replies: *The "1 Giga Pro" CPU appears to be the 1 GHz version of the Via C3 processor—a very value-oriented processor that's good for office applications and Internet surfing, but not the best choice if you want to do 3D gaming. You can see our initial report on the C3 archived on our Web site:* www.canadacomputes.com

Since that original review, the cache has been changed to 128KB Level-1 and 64KB Level-2, which increases overall performance a bit, but you're still going to want to consider other options if you intend to move heavily into multimedia applications.

Multimedia notebooks query

In *The Computer Paper*'s June Lab Report, you evaluated many mobile multimedia notebook computers and I am seriously interested in this product.

Your analysis is good, but something is missing in the specs: you never said how much video RAM each had, and I think that's quite important.

You did not mention the Sony GRX-590. The main difference between it and the 570 you included is that the 570 comes with a 1.6 GHz processor and the 590 uses a 1.7 GHz processor and includes wireless Ethernet.

Rene Larocque

Sean Carruthers replies: *We didn't mention the VAIO GRX 590 because the model doesn't appear on Sony's Canadian Web site, which means availability here is doubtful. The main difference appears to be, as you note, the processor speed (1.7 GHz as opposed to 1.6 GHz) and built-in wireless Ethernet.*

Some notebooks support dual monitors

I enjoyed the article on dual monitors in the July issue.

One option that you didn't mention, is that some laptops with ATI graphics processors on board also include the ability to extend the desktop on to an external monitor (as well as the ability to duplicate the desktop on the external monitor).

So, if you use a laptop with an external display, you may already have everything you need for multi-monitor desktop computing.

Glen C. Taylor

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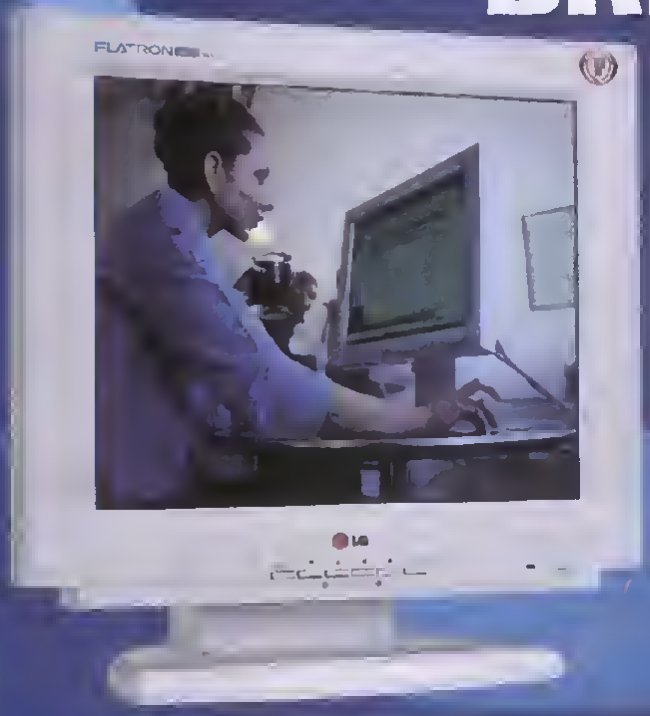

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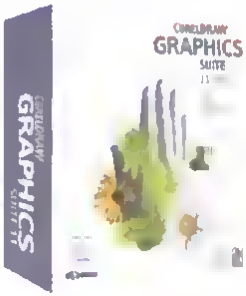


CorelDRAW Graphics Suite 11 debuts

Corel Corp. (www.corel.com) says the latest incarnation of its CorelDraw Graphics Suite will be hitting retail shelves around the time this issue of *TCP* hits the streets. The CorelDraw Graphics Suite 11—which includes tools for graphic design, page layout, photo editing, and vector animation—was designed for Windows XP and built for Mac OS X, according to the company.

The suite includes CorelDraw 11, PhotoPaint 11 and Corel R.A.V.E. 2—all of which have new tools and ease-of-use features. In addition to the three main applications, the suite has a range of supporting utilities, including ScanSoft OmniPage SE, Bitstream Font Navigator 4 (Windows only); Font Reserve (Mac OS X only); Microsoft Visual Basic for Applications 6.3 (Windows only); CorelTrace 11; and CorelCapture 11 (Windows only).

The full suite has a suggested retail price of US$529 or US$249 to upgrade (see the Corel site for upgrade eligibility).

—TCP Staff

Tool integrates QuickBooks, FileMaker

Happy Software Inc. (www.filebookslink.com) has created FileBooks Link, which it claims is the only comprehensive FileMaker Pro-to-QuickBooks integration solution. It allows FileMaker Pro (versions 4.0 through 5.5) users to exchange financial data between FileMaker Pro for Windows databases and QuickBooks Pro 2002 for Windows.

The company says the FileBooks Link plug-in supports three main modes of operation: posting, modifying and querying data elements in QuickBooks. Users can post invoices, journal entries, credit memos, cheques, and every other type of transaction directly to QuickBooks via the plug-in. Users can modify customer address information directly in FileMaker and see those results in QuickBooks. In addition, the application is able to query QuickBooks and send that information directly to FileMaker, allowing users to extract customer lists, account balances, payment histories, payroll numbers, and other significant data from a QuickBooks system for use in FileMaker.

The FileBooks Link plug-in kit includes the FileBooks plug-in for FileMaker, technical documentation in PDF format; an unlocked FileMaker Pro sample file showing the most common uses; and a sample QuickBooks company file for testing. A limited demo version of the plug-in can be downloaded free of charge for evaluation. Licensing for unlimited use at one site for one QuickBooks company is US$299, but at press time, the plug-in is available at an introductory price of US$199.

—TCP Staff

Tool adds blue-screen effects to iMovie

Hot on the heels of eZeMatte 1.0, EZedia Inc. (www.ezedia.com) has released a second plug-in for Apple's iMovie 2. The new plug-in, eZeScreen 1.0, adds professional blue-screen and green-screen video effects, allowing users to position one iMovie clip over another and adjust the transparency and fade levels of any selected colour to add animated logos, talking heads, or any QuickTime supported movie. EZeScreen requires Mac OS X and iMovie 2 1.1 or greater. It costs US$39 and can be purchased and downloaded through the eZedia Web site.

—TCP Staff

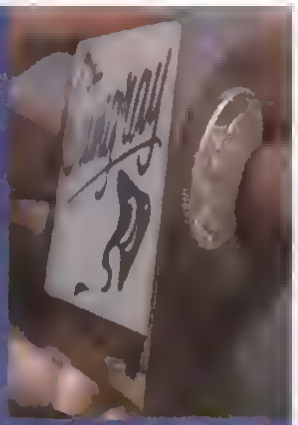
E Ink unveils 'thinnest' active-matrix display

E Ink Corp. (www.eink.com), a developer and marketer of electronic ink technology, unveiled prototypes of active-matrix displays at the Society for Information Display Symposium, held in Boston, in May.

The company demonstrated two display sizes it is developing for use in portable, rugged appliances. E Ink says the prototypes are 0.3 mm thick, about half the thickness of a credit card. Traditional active-matrix display panels are 2 mm thick and often require a backlight for a combined thickness of 4 mm or more, according to E Ink.

Its prototype displays are also more durable because they aren't produced with glass like commercially available active-matrix displays. To avoid this fragility, E Ink has combined a thin, steel foil transistor layer with its flexible paper-like electronic ink display material coated onto a plastic face sheet. Not only are they thin, light, and flexible, but the company says the displays also consume very little power.

The first prototype is targeted at card-sized mobile applications such as SmartCards and cell phones. The 1.6-inch (diagonal) display has a resolution of 100x80 pixels. The second prototype—with a 5-inch (diagonal) display and 240x160 pixel resolution—is targeted at handheld devices, including PDAs, two-way pagers, and new devices such as mobile display appliances or handheld monitors, according to the developers.



Because of the flexibility, E Ink says the prototype will appeal to device makers, allowing them to design products with flexible and curved surfaces.

E Ink plans to license the technology to manufacturers and says it expects displays based on the prototypes will reach consumers in 2004 or 2005.

—TCP Staff

Logitech aims new camera at notebooks

Peripheral maker, Logitech (www.logitech.com), has released a new QuickCam designed especially for notebooks.

The digital video and still camera has the golf-ball shape of Logitech's other Webcams, but its base allows it to sit on the edge of a laptop screen and can be folded up for easy storage. It has a 30-inch USB cable and can tilt and rotate 360 degrees. It ships with Logitech's QuickCam software, which enables video instant messaging, emailing photo and video messages; video calls over the Internet using Microsoft NetMeeting; personal video broadcasting via SpotLife; and picture and video organization in an integrated gallery.

The QuickCam for Notebook has a suggested list price of US$59.95.

—TCP Staff

Palm OS 5 ships

PalmSource Inc. (www.palmos.com) has started shipping the final version of Palm OS 5 to licenseas and devalopars. According to PalmSource, the release will bring Palm OS to a new generation of mobile devices through powerful ARM-compliant processors. Licensees can now

Continued on page 24

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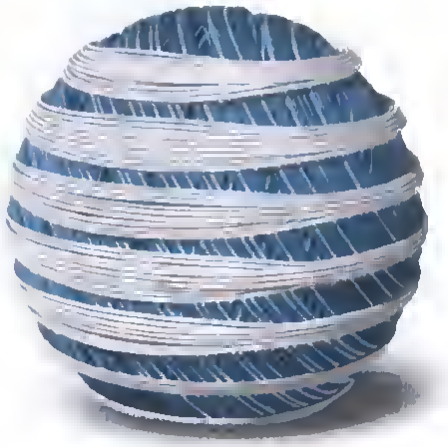

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Gadgets to watch

Timex packs sports lines with functions

By Sean Carruthers

Yeah, so the headline is a bad pun but check out these new Timex watches—they're great little gadgets. The almost 100-year-old company is known for a number of innovations in watchmaking. Here are a few of the latest wrinkles it has added to standard time keeping.

Timex Helix WRKS

From: Timex Corp. www.timex.com
Estimated price: $260

While digital watches are known for being jam packed with features, how many watches do you know of that include not only a timer, alarm, and chronograph with a 50-lap memory, but also a digital compass, thermometer, barometer, and altimeter?

As you'd expect from that lead-in, Timex's new Helix WRKS performs all of those functions, and as you may also have deduced from that group of features, it's bigger than your typical wristwatch, with a face about 5 cm across, 1.3 cm deep, and weighing in at 75 g. By comparison, my metal-encased Swiss Army watch (the heaviest watch I've ever owned) is only 50 g. In other words, it's not a watch for casual wear.

It is designed to be a companion for those who love the outdoors. the compass makes sure you don't get lost in the woods, the altimeter tells you how high up you are, and the barometer warns of impending storms. You can easily switch between modes by spinning the oversized crown on the side of the watch, and you can lock into one mode with the flick of the lock switch, protected at the bottom of the face near the strap.

The Helix WRKS uses Indiglo illumination, so you can see its face when it's dark. As well, thermometer, barometer, and altimeter readings can be displayed in either metric or imperial units. It's also water resistant, though you should resist the urge to press the buttons while the watch is underwater—doing so will break the watertight seal.

The expected caveats apply here: the specialized functions of the watch won't work well indoors, and the digital compass may not be accurate indoors, especially if there are electrical or magnetic sources of interference in the vicinity.

Despite these issues (and its large size), the Helix WRKS is a great companion if you're hitting the wilderness.

(Special note: Whoever wrote the manual for this watch should either be given an award or a reprimand for the humorous comments throughout, such as the warning "Do not eat watch.")

Timex Helix Digital Compass

From: Timex Corp. www.timex.com
Estimated price: $120

Timex also offers a more basic version of the Helix for those who just want to avoid getting lost. The Digital Compass model is more compact and features an adjustable outdoor-friendly cloth strap.

It includes a chronograph, timer, alarm, and, of course, a built-in digital compass—just press the beading button and it shows you your heading in degrees. A spinning direction dial on the top of the watch allows you to reorient yourself easily. As with other compasses, the accuracy won't be good around electrical or magnetic sources, so it's best used outdoors away from wiring and computer equipment. About the only complaint we really have—and it's a small one—is with the fairly bold gridlines on the watchface, which can make it a bit more difficult to read the display.

If you do a lot of hiking in strange locales, the Digital Compass will certainly keep you headed in the right direction.

Timex Speed + Distance System

From: Timex Corp. www.timex.com
Estimated price: $360 (50-lap), $400 (100-lap)

If you're a runner training for longer distances (say, a marathon), you'll know that it's harder to keep your pace the

Continued on page 30

Slim, trim Toshiba e310 impresses

Toshiba made a strategic exit from the handheld computing space a few years back, ditching anything smaller than its notebook line. Now it's back, and it certainly looks like a very strategic re-entry: the Toshiba e310 Pocket PC is one of the nicest Windows Pocket PC-based handhelds to come along, owing largely to its streamlined design and attractive price.

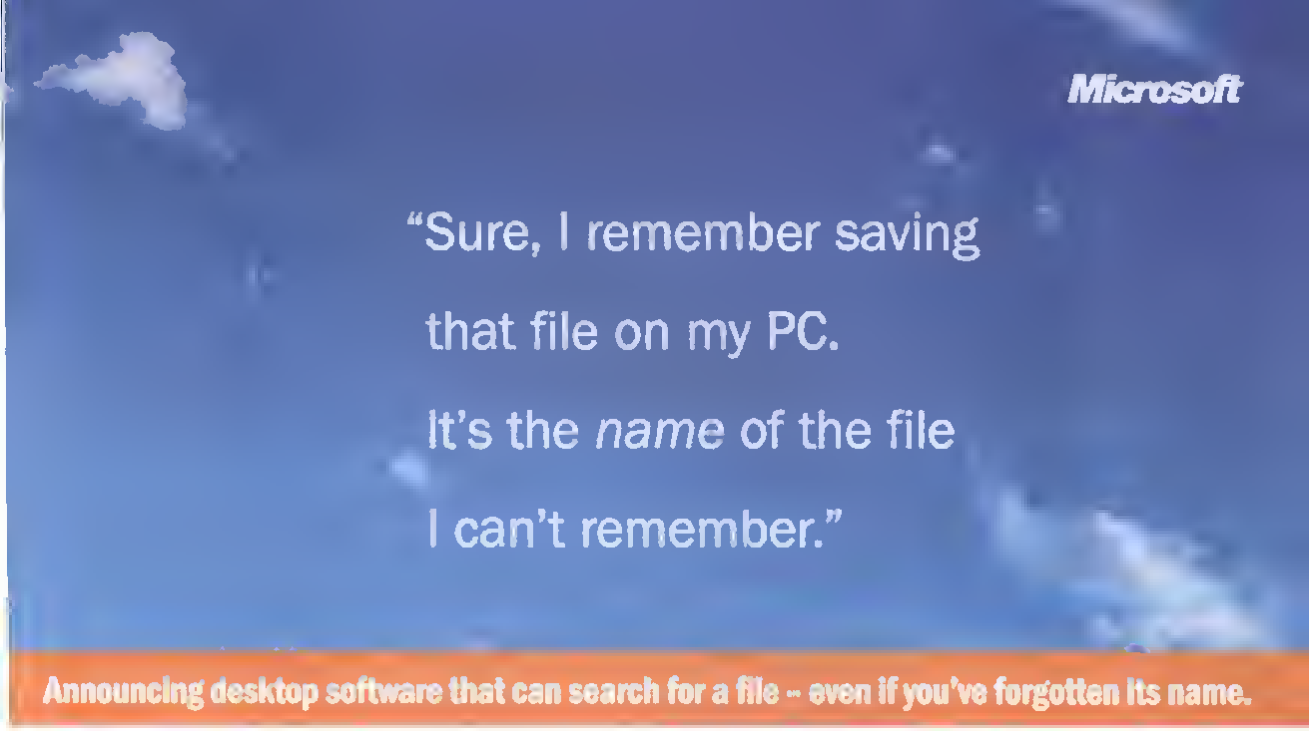
Toshiba e310
From: Toshiba Canada, www.toshiba.ca
Estimated price: $649

First and most important, the e310 isn't much bigger than the handhelds in Palm's m500 series—it's slightly taller but virtually the same width and thickness. Despite the small form factor, it still manages to fit an exceptionally clear 320x480-pixel colour TF screen and a MMC/SD slot for software/hardware expansion.

The e310 is set up with all the usual software that comes with the new Pocket PC devices, including MSN Messenger, Pocket Word and Excel, and Microsoft Reader (for e-books). It also has a mini Web browser and a version of Windows Media Player, so you can play your MP3 files back from the external media slot. (There's a headphone jack for high-quality stereo audio located along the top. The sound is quite good using headphones.)

In the end, if you've been reluctant to head to the Pocket PC platform because of the size and price of the devices, the e310 will give you plenty of reason to reconsider. It costs about the same and is generally the same size as the Palm m515—and includes an audio component to boot. Welcome back, Toshiba!

—Sean Carruthers



Announcing desktop software that can search for a file – even if you've forgotten its name.

It's called Search Companion, a feature in Windows XP® Professional that makes it easy to find files and folders on your PC. Users can enter a part of the file name, a title or sentence within the file – or even the time or date it was last opened – and Search Companion will scan your PC for the appropriate match. Office XP is also designed to make basic tasks faster and easier. With its improved calendaring features, users can check colleagues' schedules before selecting a meeting time. (If the time they propose isn't ideal, a new time can be proposed right within the original message.) Office XP also enables users to consolidate multiple email accounts, MSN® Messenger, and their personal information into one, convenient location. And with our new Smart Tags in both Office XP and Windows XP Professional, context-sensitive options appear on-screen when and where you need them to deliver relevant information about formatting documents, correcting formulas, or linking to information on the Web. For more details on how Windows XP Professional and Office XP can help make your entire organization more productive, contact your preferred technology vendor or visit us at: **www.microsoft.ca/dasktop**

Workers using Windows XP Professional are 25% more productive.

An independent study by American Institute for Research concluded that users of Windows XP Professional are 25% more productive than users of Windows 2000 while doing common business tasks (i.e. launching programs, sending email, installing new applications). The institute also found that end users could save an average of over 23 minutes on 11 common tasks with Office XP versus Office 2000.

Microsoft Windows xp Professional

Microsoft Office xp Professional

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256MB DDR RAM (PC 2100Mhz)
1.44MB Floppy Drive
40GB ATA100 7200RPM Hard Drive
Ultra ATA100 Cont. w/2x16550 Serial,
1xBI-Directional Parallel,2xUSB Port
AGP nVidia GeForce 2 MX 400 64MB TV Out
On Board AC-97 Sound Card
52x Speed UDMA CD-ROM
MLI 800 120W Stereo Speakers
ATX Mid-Tower Case w/300W PS
Daytek 17" DT 77A .28mm Monitor
107-keys Windows 98 Keyboard,PS/2 Mouse
2 Year Parts & Service Warranty

Pentium 4 1.6GHz $985
Pentium 4 1.7GHz $985
Pentium 4 1.8GHz $1015
Pentium 4 1.9GHz $1025
Pentium 4 2.0GHz $1050

Pentium 4 Gamer Ti. DDR

MicroStar 6566-E 533FSB DDR 133 s478 Board
256MB DDR RAM (PC 2100MHz)
1.44MB Floppy Drive
80GB ATA133 7200RPM Hard Drive
Ultra ATA133 Cont. w/2x16550 Serial
USB 2.0 1xBI-Directional Parallel
ATA 133 & USB 2.0
MSI GeForce 3 Ti200 128MB DDR VIVO AGP
Creative Sound Blaster Live Audigy Sound
24x CDRW CD-ROM, FireWire IEEE
Altec Lansing AVS300 Sub-Woofer Speaker
ATX Mid-Tower Case w/300W PS
NEC 17" AS75F Flat Monitor .25mm
107 keys Windows 98 Keyboard,PS/2 Mouse
2 Year Parts & Service Warranty

Pentium 4 1.8GHz $1445
Pentium 4 1.9GHz $1455
Pentium 4 2.0GHz $1499
P4 2.26GHz 533FSB $1575
P4 2.40GHz 533FSB $1780

AMD XP Gamer's Dream

MicroStar KT3-ARU DDR333 Board
256MB DDR RAM 333 PC2700
1.44MB Floppy Drive
80GB ATA133 7200RPM Hard Drive
Ultra ATA133 Cont. w/2x16550 Serial,
1xBI-Directional Parallel,2xUSB Port
ATA RAID & USB 2.0
AGP MSI 8871 GeForce 4 Ti4400 128MB VIVO PRO
Creative Sound Blaster Audigy Sound
24X CDRW ROM, FireWire IEEE
Altec Lansing AVS500 5 pcs Speaker w/Subwoofer
NEC 17" AS75F .25mm Flat Monitor
ATX Mid-Tower Case w/300W PS
107 keys Windows 98 Keyboard,PS/2 Mouse
1 Year Parts & Service Warranty

AMD XP-1700+ $1,538
AMD XP-1800+ $1,549
AMD XP-1900+ $1,604
AMD XP-2000+ $1,649
AMD XP-2100+ $1,695

Intel Best Buy

Shuttle MV25N Intel Socket 370 AGP Main Board
128MB 100 Pin SDRAM (PC133Mhz)
1.44MB Floppy Drive
20GB ATA100 5400RPM Hard Drive
Ultra ATA100 Controller w/ 2x16550 Serial,
1xBI-Directional Parallel, 2xUSB Port
AGP On board 3D Video Card
On Board AC-97 3D Sound Card,
10/100 On board Network Card,
52x Speed UDMA CD-ROM
MLI 800 120W Stereo Speakers
ATX Mid-Tower Case with CSA Power Supply
107-keys Windows 98 Keyboard,PS/2 Mouse
1 Year Parts & Service Warranty
Upgrade to
Book PCS39

Celeron 1.1GHz ..... $ 4 3 5
Celeron 1.2GHz ..... $ 4 4 5
Celeron 1.3GHz ..... $ 4 5 5
Pentium III 1.13GHz ..... $ 5 1 5
Pentium III 1.2GHz ..... $ 6 3 0

Dual Intel PIII Server

TYAN DUAL FCPGA s370 Tiger AGP Board
Dual Channel ATA100 RAID
MAX Up to 6GB Memory
ECC Register 256MB 100 Pin SDRAM (PC133Mhz)
1.44MB Floppy Drive
40GB ATA100 7200RPM Hard Drive
Ultra ATA100 Cont. w/2x16550 Serial
1xBI-Directional Parallel, 4x1SB Port
On Board ATI Rage XL 8MB SDRAM
52x Speed UDMA CD-ROM
ATX Full-Tower Case with
Enermax 350W CSA Power Supply
107-keys Windows 98 Keyboard,PS/2 Mouse
1 Year Parts & Service Warranty
Dual Channel
IDE RAID

PIII 1.13GHz Dual $1,340
PIII 1.20GHz Dual $1,440
PIII 1.26GHz Dual ..... $CALL

Upgrade Special

Upgrade to Shuttle SpaceWalker
Chassis: All Aluminum
Dimension: 270x190x400mm
Drive bays: 5.25in/ 3.5x2 $259

Upgrade from ATX Case to Aluminum Tower Case $175
18" ATX Tower 300W Power

Upgrade from ATX Case to Blue or Red Tower Case $25
18" ATX Tower 300W Power

Upgrade from ATX Case to USB/Audio Jack up front $29
18" ATX Tower 300W Power

Upgrade Options

Upgrade from 52x CDROM to DVD Drive $25.00
Upgrade from 52x CDROM to 24x CDRW $30.00
LG 24X CDRW IDE Internal Drive $75.00
Upgrade 52x ROM to CDRW-DVD Combo $79.00
Windows XP Home $145.00
Windows XP Professional $239.00
Windows 2000 Professional $249.00
Windows 98 SE $105.00
MS WorkSuite 2002 with Works and Word $149.00
Corel Word Perfect Office $35.00
Corel Draw 9/10 ..... $39/89
Lotus Smart Suite Millennium 9.5 ..... $10.00
Norton Internet Security $23.00
Norton AntiVirus 2002 ..... $29.00
WinFax Pro 10.0 ..... $35.00
Acer 56K Modem PCI V.90 ..... $23.00
D-link 10/100 PCI 538TX Network Card $16.00
Logitech QuickCam $49.00
MediaMedic Microphone $8.00
Sharp Protected Power Bar $19.00
Daytek 17" .28mm DT-77A Monitor $199.00
Extended Warranty ..... $CALL

Inventory Clearance !!!

Video Card from $10.00
Network Card from $5.00
MS Financial Package $30
Lotus $10
MS Word 97 $50
Backup Exec $50
Gamer $5
Dream Weaver $300
Used Monitor 15" $80
Used Monitor 17" $100

COMPAQ Authorized Reseller
HEWLETT PACKARD Author
Cisco Systems
Intel Pro Sucessor Dealer
SONY
acer
3Com
MC
MicroConcept
102 - 1245 West Broadway
Vancouver, B.C. V6H 1G7

PC Memory Specials

16MB/32MD/64MB 60ns 72 Pin EDO SIMM	$22/35/69
128MB/256MB SDRAM PC-100	$45/79/143
128MB/256MB/512MB SDRAM PC-133	$42/75/139
128MB/256MB/512MB ECC SDRAM PC-133	$55/84/159
128MB/256MB/512MB DDR PC-2100	$49/82/175
256MB/512MB DDR PC-2700	$109/218
256MB/512MB ECC DDR PC-2100	$109/189
64MB/128MB/256MB RAMBUS 800MHz	$40/83/165
128MB/256MB/512MB ECC RAMBUS 800MHz	$85/185/469
64MB 128MD/256MB 144 Pin Notebook Memory	$32/45/105

Hot Spots

HDD IDE Special
120GB 7200$228
80G $135

Pioneer 104 IDE DVD/RAM $469

MSI 8640 40x CDRW IDE $95

IOMegaCDRW External USB 2.0 6x $269 24x $389

AverMedia PC to TV Converter $99

DVD-R Epoch $12 CDR Windley $25

LG 12xCDRW DVD $105

Plextor IDE 40x12x40x $199

Plextor 40X IDE CDRW 24x $179 40x $199

LG 16x DVD IDE Drive $69

Floppy & Hard Drives

Panasonic 1.44MB Floppy Drive $18 00
20GB/40GB/80GB 7200/RPM IDE HDD $108/108/129
80GB/120GB 7200/RPM IDE HDD $145/169

Video Graphics Adapters

Max Gear

ATI PrtoGL 8750 64MB DDR OpenGl 1st MCAD $ 00
9TI All-in-Wonder Radeon 7500 AGP 64MB $260
ATI Rage 128 64MB AGP Card $45
ATI Radeon 7000 PCI 32MB Video Card $80
ATI Radeon 7000 32MB 64MB AGP Video Card $80/116
ATI Radeon 7000 Dual 128MB DDR Video TV ... $ 7/79
ATI Radeon 7500LE 64/64MB TV OVI 16Pin $ 91/129
ATI Radeon 8500LE Dual Head 64MB DDR AGP $249
ATI Radeon 8500 DV 64MB All-in-Wonder $400
ATI DV Wonder/TV Wonder Card (NTSC) $ 91/99
ATI USB TV Wonder External $110
ASUS V7100 GeForce2 MX 400 64MB $110
ASUS V7100 Twin View Digital Portal Plus 32MB Card $120
ASUS V8420/64 GF4 4200/4400 TV DVI 16/64MB $201/380
ASUS V8460 GF 4 4800 128MB Pure/Deluxe $181/000
ASUS V8710 GF 4MX420/440 64MB AGP Card $129/149
Matrox G450/550 32MB DDR Dual Display $ 00
MicroStar 8850-00E GeForce3 Ti200 128M VIVO $200
MicroStar 8870 GF4 Ti 4200 64/128MB TV-Out $240/260
MicroStar 8808-67 GeForce 4 440 8X 64MB VIVO $128/160
MicroStar 8888 GeForce 4 MX420/440 64MB TV $105/120
MicroStar 8877 GF 4 Ti4400 128MB TV VIVO DVI $ 00
nVIDIA TNT2 M64 AGP 32MB $ 00
nVIDIA GeForce 2 MX 200 32MB 132Bit TV $ 5
nVIDIA GeForce 2 MX 400 64MB 64MB TV Out $ 5

Monitors

Daytek DT 57A 15" 1024x768 .28mmDP $177
Daytek 17" DT 77A 1280x1024 .27mmDP $190
NEC AS60 15" / AS79 17" 1280x1024 .27mmDP $200/230
NEC AS90 19" 1600x1200 .24mmDP $330
NEC AS 2021 1600x1200 .25mmDp $ 00
NEC FE721SB 17" 1600x1200 .25mmDP FD $ 00
NEC FE950+ 19" 1792x1344 .26mmDP FD $ 00
NEC AS120F 21" Flat 1600x1200 .28mmDP FD $ 00
NEC LCD 18"/20" Viewsonic Flat Monitor $1000/2010
see next page for more Samsung Inch NEC specials
Sony E240 15" 1280x1024 .25mmDP FD $ 11
Sony G220S 17" 1600x1200 24 FD $ 10
Sony SDM-S81 18" LCD 1024x768 $1040
Sony G420S 19" 1600x1440 .24mmDP FD $ 00
Sony E540P 21" 1920x1440 .24mmDP FD $ 00
Sony SDM-S51 19" LCD 17" 1280x1024 LCD $1199/1879
Viewsonic 5815/E70 1280x1024 $800/1253
Viewsonic E70F/P77F 17" 1600x1200 .25mm $238/307
Viewsonic E90 E96F 19" 1600x1200 (Cash Only) $401/000
Viewsonic G90F 19" CRDW 1600x1200 $ 00
Viewsonic PF790 19" 1600x1200 .26mmDP FD $ 00
Viewsonic P225F 21" 1600x1200 .24mmDP FD $ 00
Viewsonic VE500(1500speaker) 15" LCD $ 00/ 00
Viewsonic VG150 15" LCD Display 1280x1024 $401/543
Viewsonic VE710 17" LCD Display 1280x1024 $ 00
Viewsonic VG171 17"9 LCD Display 1280x1080 $1210
Viewsonic VN900TFT 18"Inch 1280x1024 18" LCD Display $1199
Viewsonic Plasma Monitor VPW500-6P $12499

CDRW/DVD/Sound

Adaptec 2 Firewire 2 2-USB 2.0 CardBus PC $120
Creative PC-9 Channel Sound Card $14
Creative Labs Sound Blaster Engergy PCI/PCI 128 $20
Creative Labs SB Audigy MP3+/X Gamer $150
Creative Labs SB Live 5.1 Audigy [EEE-1394] $ 00/ 00
AOpen 52X 156X IDE CD-ROM Drive $ 00/ 45
** See upper right hand corner for CDRW Boards**
Toshiba 16X IDE DVD Drive $ 00
Plextor 24x10x40x12xIDE IDE Retail $100/210
Plextor 32x10x40x12xIDE Drive Internal 1 External $ 00/ 00
Sony 12x 40x CDRW Drive Internal $119/139
Yamaha 24x CDRW USB 2.0 External $224/340

Motherboards

Abit BT 845G BOT w/ Video SAN Lan USB2.0 $109
Abit IT-8478 845 DDR AT 4 ATA RAID $139/146
ASUS Panel Basic $24
ASUS A7N 266C / 8RD(Video) nVidia DDR Board $185/210
ASUS A7V266 RAID VIA KT266A Athlon Board $218
ASUS A7V333 / A7V333-RAID KT DDR with Audio $189/228
ASUS CUV266 s370 Pro266 AGP Motherboard $59
ASUS P4P GL P4B Video/Sat 64 DDR Board $145/170
Asus P4P800 Deluxe 2xDDR Dual Mem $ 00/ 00
ASUS P4S800 w/ Video SAN Lan USB2.0 $ 00/ 00
ASUS P4S800-MX w/ Video SAN Lan USB2.0 $ 00/ 00
ASUS P4S800D WA / WA P4 478 HAMBUS MB $225/239
ASUS P4S800-MX 845E Chipset 478 Lan $ 00/ 00
ASUS P4S800 WA s478 P4 800FSB $155
ASUS TUA 266 s370 P III or Celeron ALI DDR w/ $ 00
ASUS SK7210 Dual 300MAM Lan SCSI MB $ 00
ECS K7S5A 300R SiS Chipset Socket A LAN $ 00
ECS K7S6A 200R SIS746 Chipset Socket-A /Sound $114
ECS K7VEM SiS735 All-in-One/Lan Sock. A Bd $ 00
ECS L7VMM KM266 DDR All-in-One Sock A Board $ 00
ECS P4S5AVDX s478 533FSB SiS DDR w/ LAN $110
ECS P4VMBE s478 VGA/Lan/Sound 3D and DDR $ 00
ECS P4VXAD2 V3 s 533FSB s478 RAID LAN 6Bd $100
ECS P6KVM8 1Gigahz CPU All-in-One MB $110
Intel 845 P4 s478 SDRAM DDR AGP Board $100/175
Intel KD845 P4 SPCI s478 RAMBUS Board $220
MicroStar ME-6388LEVIA 6847 Socket 370 Bd $100
MicroStar ME-6388 Tualatin Video/Sd s370 LAN 6B $ 00
MicroStar MS-6378 Video/Sound/Lan Bd AP $ 00
MicroStar ME-6390L 845ME DDR Video/SdLan $118
MicroStar MS-6388 P4 845E s478 ARV ARU $146/188
MicroStar MS-6388 P4 845e S33 LAN RAID U6B2 $200
MS-6388 P4 845e S3B LAN RAID $200
MicroStar 6839G SiS s478VGA/LAN/Sound $ 00
MicroStar MS-6847E 845E Socket 478 FSB/AM $ 00
MicroStar MS-6847E s478 SiS DDR333 Sound 5PCI $115/198
MicroStar MS-6841 Socket A 745 DDR333 MB $ 00
MicroStar MS-6338 845E s478 w/ 533 Sound U6B2 $ 00/ 00
MSI MS-6340 845G s370 VGA/LAN/SD U3B2 $100
MSI MS-6340 845G s370 VGA/LAN/SD Dual Socket A w/Lan $ 00
MicroStar K7T Turbo2 KT 333A $100
MicroStar KT-3 Ultra ARU KT333 ATA 133 AGP MB $ 00/ 00

HD/FD Controllers

ISA IDE HD/FD Controller w/ I/O JAR1 (6650) $ 00
Adaptec 1200A ATA-66 RAID 0 1 Lan 4 Channel $139
Adaptec 2400A ATA100 RAID 5 Card 4 Channel $ 00
Adaptec 2610SA(RAID) PCI SCSI Controller $ 00/ 00
Adaptec 29160 PCI Ultra 160 SCSI $ 00
Adaptec 2940/2944 DSCSI 3 PCI Controller $ 00/ 00
Adaptec 21060/2110S RAID Ultra 160 SCSI $ 00/ 00
Adaptec 2810S/3410S RAID U160 SCSI 4 Channel $ 00/ 00
Adaptec 39160 U160 SCSI Kit with Cable $ 00
Promise Hot Swap Chassis removable kit for ATA $ 00
Promise ATA100 TX2/FastTrak 100 TX2 RAID $ 00/ 35
Promise FASTA133 2 Channel Controller $ 00
Promise FASTA 66 FastTrak 1X6 1X6 Channel RAID $ 00

Modem & Mice

AOpen 56K v 90 Hardware/Win Fax Modem $ 00
Genius NetMouse with Magic Button Serial $ 00
Genius NetScroll+ PS/2 Cordless Wheel $ 00
Logitech Mouse Optical (OEM) $ 00
Logitech Cordless Mouseman Optical $ 00
Logitech Cordless Trackman Wheel $ 00
Logitech Jedi Mouse Deputy $ 00
Logitech Mouseman Dual Optical+Trak $ 00
Logitech Mouseman Wheel Mouse Optical $ 00
Logitech TrackMate Marble Wheel $ 00
Microsoft Wheel IntelliMouse $ 00
Microsoft Optical Wheel Explorer OEM $ 00
Microsoft IntelliMouse Explorer Trackball Display $ 00
Microsoft Comfort Mouse Wireless PS/2 $ 00
US Robotics 56K v 90 ISA/Ext Fax Modem $ 00
GVC External Modem 56K USB $ 00

Keyboards & Cases

Rasdunent Power Supply 2x300W $ 00
P4 480W Power Supply 2 fan Temperature Controller $ 00
Antec SX635/SX635 Mini Tower Case $110
Antec SX635/SX640 Workstation Case $ 00
Antec SX635/SX650 Mini Tower Case $ 00
Antec SX1440B 10 Bay Server Card 400W $ 00
1U / 2U RackMount Case 160W Card $ 00
Enermax 350W+431W ATX Power Supply $ 00
Enermax Mini Super Quiet 365 465 Power Supply $ 00
Fujitsu 4725/4726 Scanner 600DPI USB $ 00
M-Tek Windows 98/Internet Keyboard $ 00
Logitech Cordless/Internet Navigator Keyboard $ 00
Logitech Cordless FreedomTouch Keyboard 2 $ 00
Microsoft Natural Elite/Internet Keyboard $ 00
Microsoft Office Pro Keyboard $ 00
Microsoft Office Keyboard $ 00
17/19" ATX Tower w/250W CSA Power Supply $ 00
25" ATX Tower with 250W CSA Power Supply $ 00

Jet Printers/Scanners

Canon S200 Color Inkjet $ 00
Canon S300 $26 Rebate Color Inkjet $ 00
Canon S400 USB Color Inkjet $149
Canon S450 USB Color $280/479
Canon S820D Duplex Color Printer $ 00
Canon S900 19x19" Color Printer $ 00
Epson Stylus C60 Inkjet Color Printer $ 00
Epson Stylus C80 Inkjet Color Printer $ 00
Epson Stylus C80 Inkjet Color Printer $ 00
Epson Stylus photo 1280 12x44 Full Bleed Paper $ 00
Epson Stylus R300/R300 Inkjet Printer 6 Colour $140/430
Epson Stylus 1520, Network Color Inkjet Printer $ 00
Epson Photo 3000P USB IEEE B Bus $ 00
Epson 3000 10.5"x44" Color Printer $ 00
Epson 1640UPhoto Scanner $ 00
Epson P2400 Professional Scanner 2400x4800 $ 00
HP 895C/895Cxi Deskjet Color Printer $ 00
HP 895CVR/895CVR Deskjet Color Printer $ 00
HP 960CSE 15/17PPM 2400x1200dpi USB Card $ 00
HP 995 Deskjet Color Printer with [illegible] $ 00
HP Photo [illegible] $ 00
HP [illegible] $ 00
HP CP 1700D Color Duplex Printer BLUE TOOTH $ 00
HP C6406/B5 Multifunction Color Printer $ 00
HP K80 12PPM Black Color Multifunction Printer $ 00
HP PSC 950 Multifunction Printer Color $ 00
HP OfficeJet V40 Fax Copy & Scan Color Printer $ 00
HP Photo Scanner 1200CPI 24Bit Scan $ 00
HP 5590C Flatbed Scanner $ 00
HP 5470S/4190C Flatbed Scanner $ 00
HP 7400c Flatbed Scanner with Transparency $ 00
HP Scanjet 7400C Scanner Bilingual $ 00
Lexmark Z55/Z53 Jetprinter $ 00
Lexmark Z55/Z56 Jetprinter $ 00
Lexmark Z65N Network Color Jetprinter $ 00
Visioneer Onetouch 8600/8700 Flatbed Scanner $ 00
Visioneer USB Flatbed Scanner 1200x3600 dpi $ 00
Visioneer Paperport 720DT Flatbed Scanner 4800 1200 $ 00
Visioneer Speedfeed scanner Semi-Pro $299

Laser Printers

Multi Color

HP 1220 $779 00

HP [illegible] 1280DN Multifunction Laser Printer $ 00
HP 1000 1200 w/ Scanner Laserjet 16 ppm $ 00
HP 2200/2200DT Laserjet 1200dpi 18ppm $ 00
HP 2200D/2200DN Laserjet 1200dpi, 18 ppm $ 00
HP 1100/1100DTN Laserjet 1200dpi, 24Mb,25ppm $ 00
HP 4100MFP Laserjet 50B 64MB,25ppm Scan $ 00
HP 8150 Laserjet,1200dpi,32ppm $ 00
HP 8150N Laserjet,1200dpi 32ppm,Network $ 00
HP 8150DN/FN 1200dpi,35ppm,Duplex,Net/MC $ 00
HP 8150MFP Laserjet,1200 64MB,High Volume $ 00
HP 9000 /9000MFP Laserjet,600dpi 60ppm,96MB/448MB $ 00
HP 4050 Color Laserjet 600dpi 64MB $ 00
HP 4650DN Color Laser 600dpi Network/Duplex N $ 00
HP 8000 Drive Laserjet,600dpi 64MB $ 00
HP 8000 Drive Laserjet,600dpi 32ppm/Duplex,Network $ 00
Lexmark Optra T520 20ppm /Duplex Network $ 00
Lexmark Optra S 2420 20ppm $ 00
Lexmark Optra E310 600dpi 18ppm $ 00
Lexmark Optra E312 / E322 Laser 600dpi,16ppm $ 00
Lexmark Optra E320N I TN 16ppm 8MB 16/100 $ 00
Lexmark Optra C750DTN Color 64MB 12PPM $ 00
Lexmark Optra C750DTNP Color 64MB 12PPM $ 00
Lexmark Optra T522N 25ppm 8MB 16/100 $ 00
Lexmark Optra T522N 25ppm 8MB 16/100 $ 00
Lexmark W810N 35ppm 128MB $ 00
Lexmark C720N 6PM 16ppm 128mbps 64MB $ 00
Lexmark X2250 Scanner/Printer/Copier $ 00

HomeNetwork/Wireless

See New Page for 3Com and D-Link Wireless Network Products
3Com 3CRWE83696A 11MB W Initial Wireless Bridge $ 00
3Com 3CRWE83796A 11MB W Initial Wireless Router $ 00
3Com 3CRWE51196 Wireless Gateway Cable/ADSL $ 00
3Com 3CRSHPW696 OfficeConnect Wireless Combus $ 00
CISCO 350 AIR-AP352E2E-A-K9 Access Point $ 00
SMC 2735W EZ Connect Wireless Combus 802.11A $ 00
Netgear MA501 NA 802.11A Wireless Combus $ 00
Netgear ME103NA 802.11A Access Point $ 00
Intel ProWireless 2000 802.11A Access Point $ 00
Intel ProWireless 2011 802.11A LAN Card Bus $ 00
Intel ProWireless 2000 802.11A PCI Adapter $ 00
Intel WPC2811BWW Wireless Lan Cardbus $ 00
Linksys WCF11 Wireless Compact Flash Card $ 00
Linksys Phanstire PCMCIA USB Access $ 00
Linksys Phanstire PCI Adapter $ 00
Linksys WPS11 Wireless Print Server $ 00
Intel WPC2811BWW Wireless Print Server $ 00
SMC7904AWBR Wireless 11Mbps Router 3 Port $ 00

Power Protection

APC BACK-UPS BX1500 $130 00

American Power

BasicUPS 350/500VA/MC $ 00
BasicUPS Pro 2000/2200UC/4UIS $ 00
BasicUPS Pro 500UC/650S $ 00
BasicUPS Pro 1400/1400 $ 00
SmartUPS 3U420/450VA/RM $ 00
SmartUPS 5U700VA/SUA1500BB/SUA1300 $ 00
SmartUPS SU2200/SU3000 $ 00
SmartUPS 6U6/6U8 Rackmount $ 00
Basic UPS Offline BF350/UPB650U $ 00
Matrix 3000XR Enhanced Solution Kit $ 00
Cartridge for Matrix 3000/5000 $ 00
Line Conditioner LE604/LE1250 $ 00
Personal SurgeArrest 7 /7 Outlets with Tel $ 00
Professional SurgeArrest 7/7 Outlets with Tel $ 00
Professional SurgeArrest 8/8 Outlets with Tel $ 00
Network SurgeArrest 7/7 Outlets with Tel $ 00
APC Notebook Surge Protection Travel Power $ 00

Cat.5 Cables & Jacks

Lathe tested

$75 00

Assembly Cat 5 10/100BaseT Cable 1ft/5/25 ft $7/10/15
Assembly Cat 5 10/100BaseT Cable 50/75/100 ft $19/35/52
Cable, Cat 5E 10/100BaseT Cable per 9 $ 00
Cable, Cat 5E 10/100BaseT Cable, per 1000 ft $ 00
Connector RJ45M $ 00
Tool RJ45 Crimping $ 00
Multi-Network Cable Tester $ 00

10 BaseTAdapter/Hubs

AOpen [illegible] $ 00
AOpen SOHO S238 Port Hub $ 00
D-Link DE-828PCT 10A/DE-828CT PCI Combo $ 00
D-Link DE-828 TP/A 5 Port Hub $ 00
D-Link DE-809TL A Port / 12 Port Hub $ 00
D-Link DE-5161T 16 Port DE-8241P 24 Port Hub $ 00

Switches/Firewall

10/100T

3COM $929

3Com 3C16793/94 Officeconnect Switch 5/8Port $ 00
3Com 3C16464B5 12/24 Port SuperStack 3 SW B Lite $ 00
3Com 3C16467 24Pt SuperStack 3 SW B Lite 100BT $ 00
3Com 3C16587 Superstack 3 SW 3900 24Pt 1x1000S-SX $ 00
3Com 3C13888 Superstack 3 SW 3900 24Pt 1x1000T $ 00
3Com 3C16771 OfficeConnect Internet Firewall DMZ $ 00
3Com 3C16772 OfficeConnect Firewall Web Cac Filter $ 00
3Com 3C16981/A Superstack 3 100 SW 3300 12/24 Pt $ 00
3Com 3C17204 SuperStack 3 SW 4400 08 Pt 10/100 $ 00
3Com 1000 Base FX / LX Module $ 00
3Com 3C17100JB SuperStack 3 SW 4400 48 Pt $ 00
3Com 3C17112/B 2 Pt 4300 Module for 1000SX $ 00
3Com 3C17121 1 Port 4300 Module for 1000T $ 00
3Com 3C16488 8 Port 10/100/1000 SW SuperStack3 $ 00
D-Link DSx-5+ 10/100 5 NWay Desktop Switch $ 00
D-Link DSS-8+ 10/100 8 NWay Desktop Switch $ 00
D-Link DES-16+ 10/100 16 NWay Desktop Switch $ 00
Intel Express 520 Module Stack Switch $ 00
Intel Express 530 12x 10/100 T Module $ 00
Linksys EF24G2 24x10/100pt and 2x1000pt SW $ 00
Netgear DS104/108/116 8/8/16 10/100 Hub $ 00
Netgear DS508/516 8/16 10/100 Rackmount $ 00
Netgear FS509 8 Port 10/100Mbps InRiser $ 00
Netgear FS516 8 Port 10/100Mbps InRiser 100 SW $ 00

100Mbits — Gigabit

3Com 3C905C-TX 10 FastEtherLink PC Management $ 00
3Com 3CR990 TX 96 EtherLink 3XP 56 84 Firewall $ 00
3Com 3CR990 TX 97 EtherLink 3XP 56 Svr/Gigabit $ 00
3Com 3C980C-982 TXM 10/100 Server 1 2Port Card $ 00
Adaptec 1737100 62002 SGA 10/100 Network Card $ 00
Adaptec 1737100 62044 4 Channel PCI NetCard 10/100 $ 00
D-Link DFE-538TX+ 10/100 PCI FastEthernet Adapter $ 00
D-Link DGE-500SX 1000Mbps Server Adapter $ 00
Intel PILA8460C3 Pro 10B+ PCI Fast Ethernet Adapter $ 00
Intel PILA8472C3 Pro/100 S Server Adapter (SDES) $ 00
Intel Pro 1000F/Pro 1000T Server Adapter $ 00
Intel Pro 1000 XT Server Adapter $ 00
Intel PILA8460C3 Desktop Adapter 2/3DES 168 Encryp $ 00
Intel PWSA8178T Pro/1000T IP Storage Adapter $ 00
Intel PILA8472C3 Pro/100 S Dual Port Server Adapter $ 00

Systems Inc.

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Fax: (604) 730-7963
Tech: (604) 738-8738

Visit our Website: WWW.MCONCEPT.COM

NEW Summer Hours

Summer Hours
Mon-Tue 9:30am - 6:30pm
Wed-Fri 09:30am - 9:00pm
Sat 10:00am - 5:00pm
Sun 12:00pm - 4:00pm

All Systems Are Tested And Burned-In For 48 Hours
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Fax Orders And Bids Are Accepted
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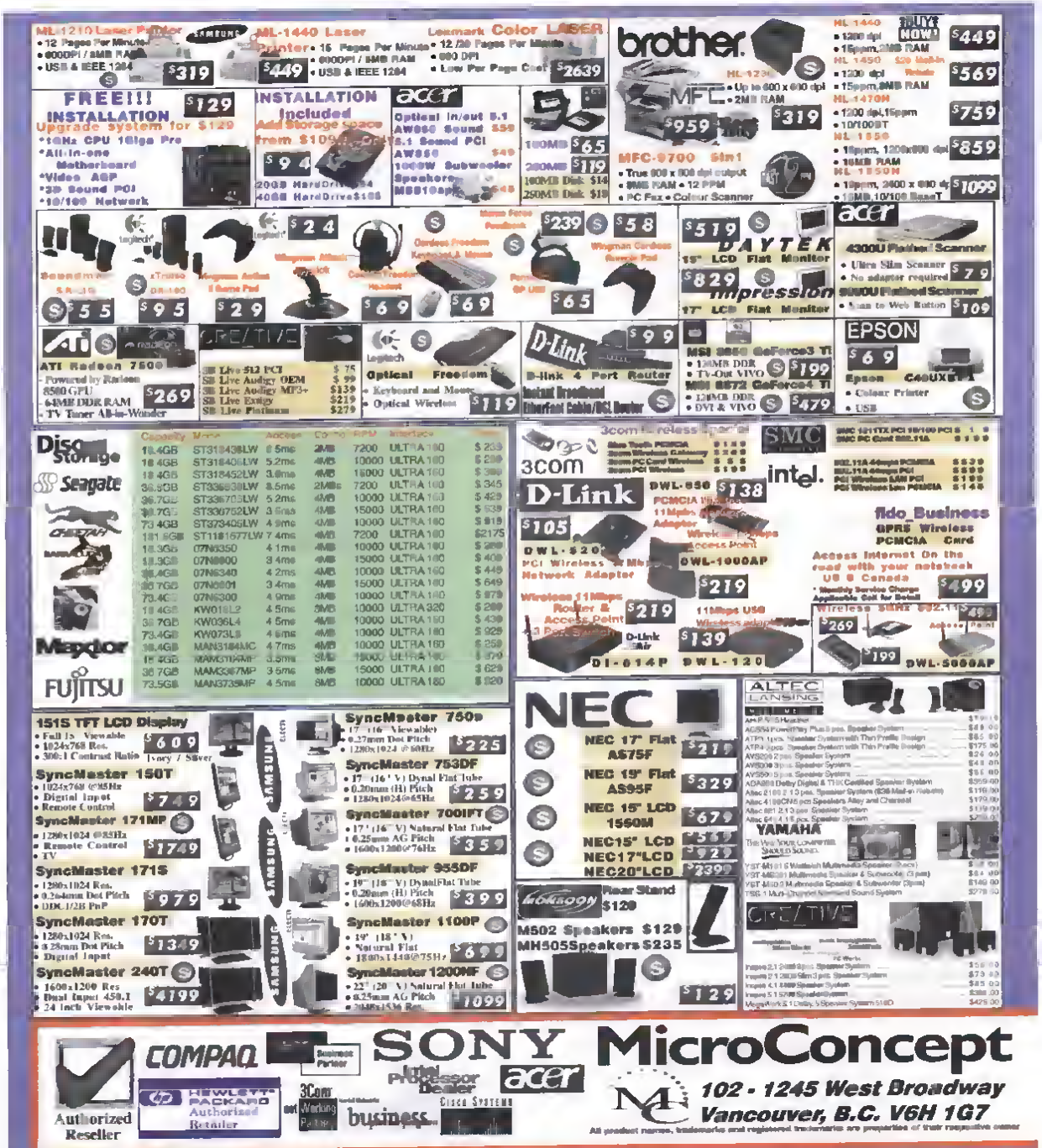
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Windows 2000

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6010	P4M1.5	256MB	30GB	DVD	15 TFT	$2,999
4610	P3-933	256MB	30GB	DVD	15TFT	$3,099
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Microsoft Windows XP Home

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128MB / 20GB HDD
14.1" TFT Display
DVD-ROM CDRW Drive
Network
Microsoft XP Pro
(2652J3U)

$2699

ThinkPad

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Intel M1.13GHz P-III CPU
128MB / 20GB HDD
14.1" TFT Display
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DVD-ROM Drive
Windows XP Pro
(2647T4G)

$3149

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T22	P4M1.6G	256MB	40GB	DVD	14.1	WireLess	$3,599
T23	P3-1.2G	256MB	40GB	DVD	14.1	WireLess	$4,380
T30	P4-1.8G	256MB	20GB	DVD	14.1	10/100	$3,699
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256MB Memory
20GB Hard Drive
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Win2000

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256MB Memory
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56Kbps V.90
DVD-CDRW
Built-in Sound
Win2000

$3999

EVO N600C
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256MB Memory
30GB Hard Drive
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56Kbps V.90
10/100 NIC
DVD-ROM Drive
Win 2000

3499

acer

$1499

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Network
Microsoft Windows XP

2099

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10/100
24x CD-ROM Drive
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Windows XP Pro
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Model	CPU	RAM	HDD	CD	TFT	Price
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630XCi	P4M1.4G	256MB	20GB	combo	14.1	$2,699
633XCi	P4M1.8G	256MB	20GB	combo	14.1	$2,899

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Palm M100
Faceplate Co

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Palm M125	Razer Sharp LCD,8MB,Ba	$299.00
Palm M130	Razer Sharp LCD,8MB,Ba	$409.00
Palm M500	Expansion Card Slot,8MB,OS v4.0	$439.00
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COMPAQ

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Pocket PC

$969

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DX3500 2.2 $299

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Fuji 2600
2Mega Pixel

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FinePix 2600 Zoom

Fuji F601
3Mega Pixel

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Sony Digital Cybershot

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DSC-P71	3.2	2x	3x	$599
DSC-S85	4.1	6x	3x	$1029
DSCF707	5.2	10x	6x	$1599

F707

P5

P71

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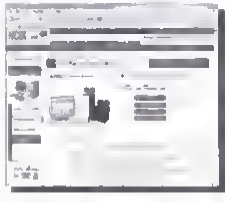

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Built in Audio and LAN
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$531 Windows XP Home $149 / Windows XP Professional $238

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Xtasy GeForce4 MX420 w. 64 meg RAM & TV out
256 megabytes of PC2100 DDR RAM
LiteOn 16X DVD with DVD Player Software
20 GB 7200 RPM ATA133 Maxtor hard drive
3.5 Floppy
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Microsoft Keyboard & Logitech Mouse
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Tsunami 3 in-1 Keyboard, Mouse & Speakers
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Pentium 4 1.8 GHz

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[redacted]
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LiteOn 16X DVD with DVD Player Software
Tsunami 3 in 1 Speakers
Tsunami 3-in 1 Desk Manager
3.5 Floppy
18" Tower Case w. 300 Watt PSU
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Pentium 4 2.0 GHz

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XP VIDEO EDITING WORKSTATION

Pentium 4 1.6 GHz

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40 GB 7200 RPM ATA100 Seagate HD
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Tsunami Mouse & Keyboard
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Keyboard D Mouse
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Intel EtherExpress Pro 100 PCI Network Card
Tsunami 3-in 1 Keyboard, Mouse & Speakers
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LG 24x10x40 CD-RW
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HP 5100 / TN	$2288/3468
HP 8150 / N / DN	$3248/3888/4748
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WHAT'S NEW

Continued from page 12

choose from a full range of processors, starting with the ARM 7 CPU and scaling to the highest-performance ARM chips from Intel, Motorola and Texas Instruments.

New features in Palm OS 5 include an enhanced user interface, according to PalmSource. Icons and fonts have been enhanced to support high-resolution displays and to provide greater readability. In addition, the user interface can now be personalized with colour themes.

Other new features in Palm OS 5 include: strong data-encryption services and Secure Socket Layer (SSL) services for more secure email, Web browsing and online transactions; higher-fidelity sound and support for high density screens; and support of 802.11b for connections to wireless Local Area Networks.

With the introduction of the newest version, PalmSource has followed the lead of Apple and Microsoft and also introduced the PalmSource Compatibility Program, which allows developers to qualify their software for Palm OS 5 and receive permission to use the Palm Powered Compatible logo. According to PalmSource, this logo assures customers that the software runs well on current 68K products and future ARM-compliant products.

Devices utilizing the new operating system are expected this fall.

—TCP Staff

Printer tops home office 'must-haves'

The dream of the paperless office is still a myth, according to research by HP (www.hp.com). In a recent telephone survey conducted by International Communications Research in the U.S., printers topped the list of home office tools consumers "can't live without" (43 percent)—outranking additional phone lines (19 percent), fax machines (10 percent) and electronic calendars (8 percent).

Continued on page 26

Philips designs tiny optical drive for portable devices

Philips (www.research.philips.com) has demonstrated a fully functional miniature optical disc drive that can store up to 1 GB of data on a single-sided 3-cm diameter optical disc—a size compatible with portable devices like digital cameras, cell phones, and PDAs.

The company says the small form factor is possible because of recent advances in blue laser technology, and its own innovations in optical storage media and miniaturized opto-mechanics.

Creating a drive to fit into small portable devices required miniturizing all of the elements, Philips said. To that end, Philips developed the world's smallest objective lens for blue laser recording, which allowed it to reduce the height of the optical disc drive to 7.5 mm from the 12.5 mm or more typical in current drives.

Other key developments in shrinking the size of the drive include using a plastic lens instead of glass and creating an ultra-thin version of the actuator that positions and focuses the laser beam onto the optical disc, according to Philips.

The resulting fully functional prototype drive is just 5.6x3 4x0.75 cm. The demonstrator setup with the driving electronics currently still on a separate board, successfully played back MP3 data from a 3-cm diameter optical disc, Philips said.

—TCP Staff

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KDS 7F/ Samsung 750S / 753DF	$220/220/245
Viewsonic PF790/NEC FE750+ /NEC1550V	$565/350/569
Viewsonic Vg150/ Vg151	$695/720

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FNT2-32M/GF2M3200 32M TV	$69/69
GF2 Mx400 64M / GF2 Mx400 64M TV	$69/79
MSI GEI Ti200 128M/GF4 MX420/GF4 MX440	$218/319/143
GF4 MX440VTP / GF4 MX440/GF4TI4200	$164/195/285
GF4 TI4400/ GF4 TI4600	$368/505
180W/180W/MLI 478A/747	$8/18/38/40
ACS 33 /ATP3/AVS200/300/500	$60/95/26/49/66

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GL 3.06/3.06	$499/499
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P4-2.0	$569

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P4-1.7 256E	$635
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P4-1.9-256E	$675
P4-2.0-512E	$695
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Duron 950/76	$549/589
Duron 1.1/1.3G	$569/579
T-B 900/1.1G	$569/599
T-B 1.3/1.4	$595/619
XP-1600+/1700+	$619/639
XP-1800+/1900+	$649/669
XP-2000+/2100+	$739/799

INTEL-POWER
Mainboard 256-PC133 TNT2 32M PCI Sound FDD 56K Modem 20G/5400rpm 18" ATX 250W 52X CDROM 98 Keyb Wheelmouse Pad 500W Subwoofer Speaker

GL 30 (800)	$609
GL 3.06/3.06	$599/609
GL 3.2G	$678
P4-2.8/800E	$669/689

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P4-GL-1.8G	$739
P4-1.6	$649
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WHAT'S NEW

Continued from page 24

Colour printing is also becoming a mainstay according to the researchers who found that 94 percent of printer owners surveyed said they use printers for a variety of creative projects. In particular, 58 percent of those polled said they print colour photographs from email or digital cameras. Other creative printer uses include making greeting cards, invitations or announcements (72 percent), arts and crafts projects (53 percent), and CD and DVD labels and covers (23 percent).

—TCP Staff

Toshiba Pocket PC family goes wireless

Toshiba of Canada Information Systems Group (www.toshiba.ca) has introduced the e740 Pocket PC, which it says is Canada's first handheld with integrated 802.11b wireless LAN technology. The device is powered by Intel's 400 MHz PXA250 processor, which promises increased performance without compromising battery life, according to Toshiba.

The e740 Pocket PC has expansion slots for both CompactFlash II and Secure Digital (SD) format cards and plug-ins. It weighs in at 185 g. It runs Microsoft Pocket PC 2002, which comes with Pocket versions of Outlook, Internet Explorer, Word, Excel, and Windows Media Player 8.0. The Toshiba e740 Pocket PC has a suggested list price of $949.

—TCP Staff

ToTheTrash manages Mac trash

Mireth Technology (www.mireth.com) is offering Mac OS X users an alternative for handling trash. ToTheTrash! provides a place to put those files not ready for deletion yet, allowing users to specify how long to keep each one. Files can be retrieved if they're needed before the expiry date, when they're automatically deleted.

ToTheTrash! for Mac OS X costs US$19.95 and can be ordered from Mireth's Web site, or downloaded (free demo included) from www.mireth.com/pub/download.html.

—TCP Staff

ViewSonic introduces UltraBrite displays

ViewSonic Corp. (www.viewsonic.com) has added four new displays to its line of monitors that, according to the company, provide enhanced viewing capabilities, including up to three times brighter images than current displays.

Two CRT displays, the P95f+ and the P75f+, and two LCD monitors, the VE510+ and the VX500+, feature UltraBrite technology. It allows users to increase screen brightness up to three times higher than normal, with the touch of a button.

Viewsonic says UltraBrite makes these displays ideal for professionals who require high-end performance when working on graphic or Web design, video or photo editing, desktop publishing, or gaming applications, for example.

The new monitors include the following specs:

Model	Size	Aperture grille	Max. res.	Price*
P95f+	19-in.	0.25-0.27 mm	1,920x1,440	$539
P75f+	17-in.	0.25 mm	1,792 x1,344	$369
VE510+	15 in.		1,024x768	$789
VX500+	15-in.		1,024x768	$849

**Suggested retail price*

Both LCD models include integrated speakers. The VX500+ also comes with a microphone and analogue and digital inputs.

Standard with all four displays is a lock option to prevent accidental changes to personalized monitor settings. The monitors are backed by a limited, three-year warranty on parts, labour, and backlight.

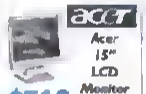
—TCP Staff

SD card offers one-button backup

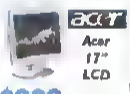
SanDisk Corp. (www.sandisk.com) has intro-

Continued on page 28

Hot Summer Savings...it's time to make a deal!



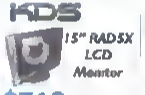
Acer 15" LCD Monitor — Three-Year Warranty
$519



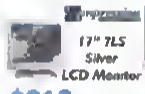
Acer 17" LCD — Three-Year Warranty
$838

Daytek 17" Perfect Flat Monitor — Three-Year Warranty
$209

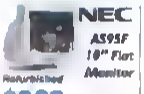
Refurbished NEC Fe700+M w/Speakers 17" Flat Monitor — One-Year Warranty
$199



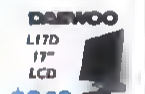
KDS 15" RADSX LCD Monitor — Three-Year Warranty
$519



Mitsubishi 17" 7LS Silver LCD Monitor — Three-Year Warranty
$819



Refurbished NEC AS95F 19" Flat Monitor — One-Year Warranty
$269



Daewoo L17D 17" LCD — First 2 Units
$949

Yamaha CDRW 5100EVK 24x10x40 with Software — Retail Box
$165

LG CDRW & DVD Combo Drive — OEM
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AOpen CRW2440 24x10x40 2MB Buffer — Retail Box
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LG Electronics DVD 16x IDE DVD-ROM — OEM
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Pioneer DVR-104 DVD-R Burner
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Liteon 40x12x48 INT IDE CDRW — Retail Box
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Toshiba DVD 16x IDE DVD Drive — OEM
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Maxtor 40GB 7200rpm U133 3-Year Warranty — OEM
$139

Western Digital 40GB 5400rpm U100 3-Year Warranty — OEM
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Maxtor 40GB 7200rpm U133 3-Year Warranty — OEM
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iBT Geforce 4 Ti 4200 64M DDR w/TVOut & DVI — Retail Box
$249

Nvidia TNT2 32MB AGP Video — Retail Box
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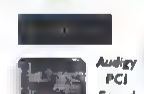

Audigy PCI Sound w/Firewire — OEM
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D-Link 538TX 10/100 NIC — Retail Box
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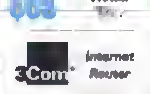
Linksys DI-604 4-port Internet Router — Retail Box
$99



3Com Internet Router with Print Server — Retail Box
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Linksys Network Switch 8-Port 10/100 — 2x 10/100 NIC Free!
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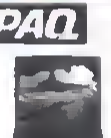
Compaq Presario 1200 Series with WindowsME



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WHAT'S NEW

Continued from page 26

duced its first combination software/memory card for Palm OS devices. The 32 MB Secure Digital (SD) card comes pre-loaded with Blue Nomad's BackupBuddy VFS software.

The new software/memory card will allow Palm OS devices with an SD slot to easily backup, store, and encrypt data on the SD card with the touch of one button.

The 32 MB SD Expansion Card has a suggested price of US$49.99.

—TCP Staff

Visioneer releases slim-line USB scanner

Visioneer (www.visioneer.com) has introduced the first scanner in its new Slimline series, the OneTouch 7100 USB colour flatbed. At 43x28x6.5 cm (17x11.9x2.6 in.), the 7100 is 33 percent smaller than previous models, according to Visioneer.

The new model uses CCD (couple charged device) sensors and has a maximum scanning resolution of 1,200x4,800 dpi, 48 bit internal colour, and FlashBack Bi-directional AutoScan Technology.

Most slim-line scanners use CIS (contact image sensors), but Visioneer says CCD sensors produce better image quality and more accurate scanned documents.

All OneTouch scanners come with five buttons pre-configured to scan at the optimal settings for common tasks. The five buttons on the OneTouch 7100 USB are scan, copy, OCR, email, and custom.

The scanner comes bundled with ArcSoft PhotoImpression 3.0 and ScanSoft's PaperPort Deluxe 7.0. It also features Scan Manager Pro, an advanced TWAIN driver with tools normally found only in high-end image editing applications, according to Visioneer.

Minimum system requirements for the OneTouch 7100 USB are a Pentium or equivalent processor, running Windows 98, 2000, Me, or XP, with 64 MB RAM (128 MB for Windows XP), 200 MB available hard disk space, a CD-ROM drive, colour monitor, and USB port. It has a suggested retail price of US$99.99.

—TCP Staff

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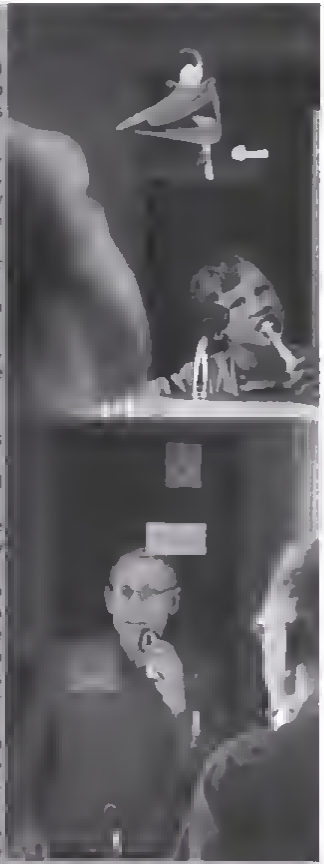
Philips HomeLab opens its doors



Philips (www.research.philips.com) has opened a prototype home to test technologies that react to its occupants' wishes and moods.

The research facility is a real house, located in Eindhoven, Netherlands, filled with state-of-the-art technology that will be tested by normal people in an everyday environment, says Philips.

The company says HomeLab is not like traditional product testing facilities; it's a live-in home linked through hidden cameras, microphones, and one-way mirrors to observation rooms, allowing researchers to observe the occupants around the clock.

The lab includes a range of technology prototypes Philips classifies as "ambient intelligent," which are sensitive, personalized, adaptive, and responsive. Among them, home entertainment systems that respond to voice commands or create digital fantasy environments for virtual reality games; biofeedback technology embedded into household objects such as a bathroom mirror; and an interactive user interface that consolidates multiple devices into a single system for managing activities such as voicemail, watching video, or listening to music.

Most of the connections in HomeLab are wireless, with systems controlled by handheld devices and large-area flat-panel displays.

Philips says traditional testing has relied upon volunteers testing new products for a limited time, often only a matter of hours. With HomeLab "residents" stay between 24 hours and two months, depending on the research being conducted.

"To achieve a world in which Ambient Intelligence is pervasive, we need to teach technology to react to humans rather than forcing humans to 'program' technology," said Erkki Liikanen, a commissioner with the European Union, which has invested in HomeLab.

—TCP Staff

Logitech cuts cord on Optical Trackman

Following the release of wireless keyboards and mice, Logitech (www.logitech.com) has cut the cord on its optical trackball peripheral.

The Cordless Optical TrackMan uses Logitech's optical Marble technology and transmits cursor commands to a PC via 27 MHz cordless digital radio technology that does not require a line of sight.

The TrackMan has forward and back buttons, scroll wheel, and drag-lock button. Users can also customize the button commands.

It's powered by AA batteries and comes

Continued on page 36

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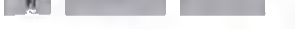

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ABIT NV7133 Raid [illegible] ATA 133 Motherboard w/1394	$[illegible]
ASUS A7V333-WA SocketA Motherboard	$180.00
ASUS P4B266 C-WOA DDR Motherboard 8PCI 2DDR	$[illegible]
ASUS P4B33-VM/L S478 i845 6PCI AGP 2DDR Motherboard ATX	$180.00
ASUS P4S333 WA S478 SiS645DX 5PCI 1AGP 2DDR ATI	$[illegible]
ASUS P4T E Socket478 RDRAM ATA100 Motherboard ATX	$[illegible]
ASUS S478 i845E 6PCI/AGP/DDR/ATA100/USB2 Motherboard ATX	$[illegible]
Elite K7S5A SocketA DDR/SDR Motherboard w/Audio/LAN	$[illegible]
Elite L7S0M Socket A3PCI/2DDR Motherboard Video/Audio/Lan	$100.00
Elite P4VXAB S478 ATA133 PSB533 3xDDR4 Motherboard A & Lan	$160.00
GIGABYTE GA-7VRX SocketA ATA133 2xDDR Motherboard ACR	$130.00
GIGABYTE GA-8IEX S478 i845GE/ATA100 Motherboard AC97	$170.00
Intel D845BG Socket478 DDR 6PCI Motherboard/Audio	$139.00
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MSI 845 Ultra-ARU S478 3xDDR RAID Motherboard	$[illegible]

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Maxtor 20 0GB ATA-100 5400RPM/8ms/2MB Hard Drive	$90.00
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Maxtor 40 9GB ATA-133 7200rpm/8.7MS/2MB Hard Drive	$115.00
Maxtor 80 0GB ATA-133 7200rpm/8.5ms/2MB Hard Drive	$130.00
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WD 100GB ATA 100 7200rpm/8.9ms/2MB Hard Drive	$[illegible].00

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Fujitsu 36.7GB 10K/8MB Ultra160 SCSI LVD Hard Drive	$[illegible].00
Fujitsu 73.5GB 10K/8MB Ultra160 SCSI LVD Hard Drive	$[illegible].00
Maxtor 18.4GB Atlas 10K/4.5ms/8MB 68pin U160 SCSI Hard Drive	$270.00
Maxtor 36.7GB Atlas 10K/4.5ms/8MB 68pin U160 SCSI Hard Drive	$[illegible].00
Maxtor 73.4GB Atlas 10K/4.5ms/8MB 68pin U160 SCSI Hard Drive	$[illegible].00
Seagate Cheetech 36.7GB 10K/rpm 68pin Hard Drive	$[illegible].00

NoteBook

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ASUS M1300A P3-[illegible]	$1,[illegible].00
IBM ThinkPad [illegible]	$1,[illegible].00
Toshiba Tecra [illegible]	$1,[illegible].00
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ABIT 64MB GeForce4 MX440 AGP Video Card w/ TV-Out	$130.00
ACpen 32MB TNT2 M64 AGP4 Video	$[illegible].00
ASUS V8170DDR GeForce4 MX420 64 Win tv Video Card (Retail)	$100.00
ASUS V8200 Pure 64MB DDR GeForce3 GTS AGP Video Card TV	$[illegible].00
ASUS V8200T5 Deluxe Pure 64MB DDR 4XAGP Video Card	$440.00
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3Com 3C905C-TXNM 10/100 Network Card	$[illegible].00
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LG 24x10x40 Buffer Prevention CD Re-Write Drive	$77.00
LG 32x10x40 Buffer Prevention CD Re-Write Drive	$90.00
LiteOn 32x10x40 Int. IDE CD Re-Write Drive Retail	$90.00
Plextor 24x10x40 Int. IDE CD Re-Write Drive	$229.00
Yamaha 24x10x40 IDE CD Re-Write Drive Retail	$240.00

Monitor

AO[illegible] Monitor	$170.00
AO[illegible] SVGA [illegible] 1280x1024 Color Monitor	$[illegible].00
LG 19" 917T, 0.24 1600x1200@85Hz SVGA Color Monitor	$479.00
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NEC 17" 700V FlatPannel LCD 1280x1024	$[illegible].00
NEC 17" FE700+ SVGA Color Monitor	$379.00
NEC 17" FE790+ SVGA Color Monitor	$348.00
NEC 19" 4998F SVGA Color Monitor	$379.00
Samsung 15" 151S LCD Panel	$[illegible].00
Samsung 15" 151S (Silver) LCD Panel	$[illegible].00
Samsung 17" 750B Color Monitor 24DPI 1280X1024	$180.00
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Samsung 17" 795DF 0.28 1600x1200@85Hz Color Monitor	$[illegible].00
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Acpen Prisa 4300U Scanner	$75.00
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Epson 1640U Perfection Scanner	$[illegible].00
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LiteOn 16X IDE DVD 22160 kb/s, 108ms	$[illegible].00
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Pioneer 16X DVD 21600 kb/s, 512K, 95ms Tray	$[illegible].00
Pioneer 16X Int. IDE SlotLoad DVD Drive	$[illegible].00
Sony 16x Int. DVD Drive	$[illegible].00

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Acer[illegible] 52X DE CD ROM D[illegible]ual	$45.00
Acer 56X IDE CD-ROM Drive Retail	$48.00
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SoundBlaster Audigy MP3 Sound Card Retail	$120.00
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SoundBlaster Audigy Sound Card	$99.00
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Acpen 104 W[illegible]S2 Keyboard	$15.00
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MS Natural Elite Keyboard PS/2	$30.00
MS Natural PRO PS/2 USB Keyboard	$[illegible].00

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Logitech Optical Mouse	$22.00
Logitech Wheel Mouse PS/2	$15.00
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MS Optical Mouse USB&PS/2	$28.00
Wacom Graphics Tablet 4"x5" USB	$139.00

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Acer 5 Port 10 Base Hub	$[illegible].00
D-Link 16Port Desktop 10/100 Nway Switch	$[illegible].00
D-Link 5Port Desktop 10/100 Nway Switch	$[illegible].00
D-Link 8Port Desktop 10/100 Nway Switch	$[illegible].00
Linksys 16Port 10/100 Switch	$[illegible].00
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OEM 5Port Networking Hub 10 Base	$33.00
SMC 4Port Router w/Print Server Port	$[illegible].00

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64MB GeForce4 MX420 DDR AGP Video Card w/TV out
Tower Case with 300W P4 Power Supply
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Gadgets to watch

Continued from page 14

longer you run. To make sure you're giving your all and running at the proper pace, you can either hire a trainer to watch you during your entire run, or you can pick up Timex's Speed + Distance System.

While it doesn't have the personal touch of a trainer, the two-piece Speed + Distance System is a pretty nice substitute. It includes what looks like a standard digital wristwatch and a reasonably small GPS module that you strap to your arm or clip to your belt. The GPS module connects to the wristwatch via radio signals. Using data it obtains from GPS satellites, it measures how far you've travelled, current, average, and maximum speed, pace, and more. You can set up alarms by time or distance. It's also a full-featured watch, so includes a chronograph, timer, and alarm.

We were initially skeptical about the system, but it seemed to work just fine. Before using it for the first time, you have to let it sit for about four to five minutes to get the proper satellite orientation, but as long as you stay within about 160 km (100 miles) of your first calibration, subsequent "boot-ups" should take less than a minute. After that, you turn the monitor on and start running. It uses the signals from the satellites to figure out your speed and how far you've gone. There is sometimes a small lag when you change pace or direction, but it generally corrects itself fairly quickly.

As you'd expect, the biggest problems with the unit are related to the GPS module. Though the arm strap keeps the module securely attached, the whole setup does add 175 g to your arm, which may be a problem if you're trying to run light. (If you strap it incorrectly it can also make your arm throb a bit.) Also, because GPS units always need a fairly clear view of the sky, you won't be able to use it indoors, and may have problems using it in urban areas with a number of tall buildings.

The Speed + Distance System comes in two models: the 50-lap version for $360, and the 100-lap version for a cool $400. Not cheap, but a lot less expensive than a full-time trainer ❑

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Clié sets new standard for Palm devices

Sony Clie PEG NR70V
From Sony Canada www.sony.ca
Estimated price: $999

So, you want to buy a PDA but you're not sure which way you want to go. The Pocket PC world features a lot of wonderful multimedia devices, but the Palm universe is well established and has the operating system you want. Well, the new Clie may help you decide.

Sony's entry into the world of the Palm-based PDA was interesting but not ground breaking: first-generation devices were very stylish and competent, but variations on a common design theme.

The newest model, however is almost enough to make your jaw drop: it's exceptionally thin, has an amazing 320x480-pixel colour screen, plays MP3 files (which can be stored on MemoryStick modules, since the Clie includes a MemoryStick slot), and even has a built-in 100,000-pixel CMOS camera.

It's also a Clié with a twist—a twist and swivel screen that is, which transforms it into a handheld unlike any other on the market.

The Clie is actually a clamshell design that opens up to reveal the screen on one side and a QWERTY-style keyboard on the other, in addition to the usual Palm buttons. The screen portion is on a swivel that allows it to rotate through 180 degrees, so that when you close the clamshell, the screen can be facing out with the keyboard hidden away.

Whatever program is displayed on the screen then reorients itself for your new configuration (a neat trick made neater by the fact that the areas normally stenciled onto the plastic screen for Graffiti data entry are actually displayed in high-res by the TFT screen itself).

The Clié comes preloaded with a ton of software, including an audio player, camera capture software, a paint program for editing images, gMovie software, and image management and display software. Hardware wise, the bundle also ships with a USB sync cradle and headphones with a remote control.

—*Sean Carruthers*

The ComputerPAPER VIP

Clié PEG-NR70V raises the bar for every other Palm-based device with its beautiful screen, wonderful multimedia features (audio and video), and the excellent flip-screen implementation.

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Hands On

Lab Test • Hardware Evaluations • Software & CD-ROM Reviews

Flat, bright... getting affordable

TCP Lab checks out 17-inch-plus TFT monitors

By Dave Chappelle

These days, you can buy a 15 inch flat-panel monitor for about $500. But if you're looking for something a little bigger, read on. For this Test Lab, we asked manufacturers for 17- and 18-inch analogue flat panels in the $1,500 price range. We received a few that were closer to $1,000, and evaluated them separately, since such a large price difference puts them into a different category for most consumers.

Of the advantages analogue LCDs have over CRTs, one of our favourites is the "Auto" button. When pressed, the image automatically centres on the screen. Most users will applaud this "one-touch" time saving feature. It sure beats the often frustrating process of scrolling through on-screen display (OSD) controls trying to get a flat, straight, distortion-free image to appear on a curved tube.

As video signals begin and end digitally, digital LCDs don't require controls. It's the digital-to-analogue to digital conversion process that inflicts the distortion controls are designed to correct.

The other benefits of flat panels over CRTs are that they draw less power, operate cooler, and generate less radiation. And LCDs are easier to look at, so your eyes won't get tired as they can when staring intently at a CRT for an extended period.

On the down side: 17- and 19-inch flat panel monitors are still two to four times the price of CRTs; a slower refresh rate of 60 Hz will discourage serious gamers and graphics pros; and while colour matching software is included with some pricier models, flat-panel still can't be fine-tuned as well as high-end CRTs.

Because flat panels are, well, flat, wall—mounting them on a wall is a real

Continued on page 38

Pavilions move to Pentium 4

In the June issue, we looked at multimedia-savvy notebook computers, including Hewlett-Packard's Pavilion ZT1170 model. HP's update to this model, the ZT1175, incorporates a 1.4 GHz mobile Pentium 4 processor.

Like the previous model, the ZT1175 has a high-quality 15-inch TFT screen, Windows XP Home, a 30 GB hard drive and a DVD/CD-RW combo drive. It also features a lot of connectivity options, including Ethernet, a 56Kbps modem, one FireWire and two USB ports. It only has one PC Card slot onboard, but it features a slot for Multimedia Card/Secure Digital cards. This particular model comes with 256 MB of memory, 16 MB of which is set aside for use with the S3 graphics processor.

The system is pretty well set up for multimedia with a set of built-in Polk Audio speakers and CD player controls on the edge of the notebook, allowing you to play audio (CD or MP3) when the notebook itself is off. The DVD component is very good, and playback is smooth. While the 3D performance won't win any awards, it's certainly competent, and capable of handling everyday tasks and movie playback. The SD slot is a nice touch for those with SD-compatible devices (digital cameras, MP3 players, handhelds, and more).

The notebook comes with a nice software bundle, which includes a number of Microsoft titles (Works 6.0, Microsoft Money 2002, and more), Quicken Financial Centre, MusicMatch Jukebox, WinDVD movie playback software, Lernout and Hauspie's TruVoice speech engine, and a few games.

Pavilion ZT1175

From: Hewlett Packard Canada, www.hp.ca

Estimated price: $2,899

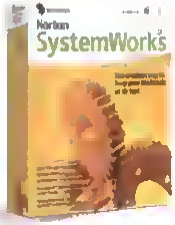
While the Pavilion ZT1175 doesn't really break any new ground, it's a very nice update to an already impressive product line.

—Sean Carruthers

Norton suites a good upgrade for OS X users

By Justin Siemens

Norton SystemWorks 2.0 is the first complete suite of Norton products designed with OS X in mind, but in our opinion it doesn't quite live up to previous versions.



Norton SystemWorks 2.0

From: Symantec, www.symantec.com

Estimated price: $199 ($50 mail-in upgrade rebate)

Earlier versions of SystemWorks included Norton Utilities 6.0, Antivirus 7.0, as well as Retrospect Express 4.0 and Spring Cleaning. SystemWorks 2.0 includes Norton Utilities 7.0, Antivirus 8.0, Disk Warrior Recovery Edition, Aladdin Spring Cleaning, and Retrospect Express 5.0. The problem is that the new versions of Utilities and Antivirus are only available for use in Mac OS X. So, if you are still using Mac OS 9, you'll have to use the older versions, which are included on the CD.

If you aren't an OS X user, this means you gain no new functionality, but it gets worse. In order to run the OS X versions of Utilities and Antivirus they need to be installed on your hard drive, they can't be run from the CD. So if you have a serious problem that requires booting from the CD, you are back to the old versions again.

On our test systems, Norton Utilities could only fix very minor problems in OS

Continued on page 46

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WHAT'S NEW

Continued from page 28

with a limited five-year warranty. Also included are MouseWare and WebWheel software for smarter Internet browsing.

The TrackMan is compatible with Windows 95, 98, Me, NT 4.0, 2000, or XP (and 3.1/DOS for basic functionality), and Mac OS 8.6 to 9.x. An available PS/2 or USB port, CD-ROM drive, and Internet connection (to use WebWheel) are also required. It has suggested list price of US$69.95.

—TCP Staff

Kyocera debuts new smartphone

Kyocera Wireless Corp. (www.kyocera-wireless.com) has unveiled a new version of its Palm OS-based smartphone, the 7135. Unlike its original QCP 6035 smartphone, the new model features a small, lightweight clamshell design and uses CDMA technology, which has a top data transfer speed of 153Kbps. The Kyocera 7135 has

a 65,000-colour high-resolution screen, an MMC/SD compatible expansion slot, and an onboard MP3 player.

The 7135 incorporates a speakerphone, voice-activated dialing, silent vibrating alert, two-way SMS text messaging, Eudora email, and three modes of Web access (HTML, Web Clipping, and WAP). It is a tri-mode CDMA phone, that operates on 1,900 MHz, 800 MHz, and analogue cellular networks.

It runs Palm OS 4.1 and has the complete functionality of a Palm organizer. It has 16 MB of on-board memory. The phone can HotSync data with a desktop PC via a USB, infrared, or serial connection. The device measures approximately 10x6x3 cm (4x2.43x1.17 in.) and weighs approximately 186 g (6.6 oz.). A standard lithium ion (Li-Ion) battery provides up to 3.5 hours of talk time and up to 160 hours of standby time in digital mode.

The Kyocera 7135 smartphone is expected to ship by the end of the year. Kyocera had no details on which carriers would support the smartphone, but said they would include those that support CDMA 1X networks. In Canada, Bell Mobility and Telus Mobility operate such networks.

—TCP Staff

Oracle, Yahoo! Store strengthen ties

NetLedger Inc. (www.netledger.com) has announced the enhanced integration of its Oracle Small Business Suite and Yahoo! Store (store.yahoo.com), an online retail hosting service.

The integration will allow Oracle Small Business Suite users to simplify their business processes by streamlining order fulfillment, credit card processing, inventory management, and reporting, through Yahoo! Store. According to Net Ledger, Yahoo! Store has enabled more than 19,000 merchants and small businesses to establish an online presence and sell products and services online.

The tighter integration means merchants will now be able to move between the two applications without signing on and off, utilize bi-directional data exchange, and have the option of automating the credit card payment upon completion of order fulfillment within the Oracle Small Business Suite.

—TCP Staff

McAfee focuses on small biz security

McAfee Security (www.mcafeesecurity.com) has introduced a pair of security products for small and medium size businesses: McAfee Active Virus Defense (AVD) and Active VirusScan Small Business Editions.

The new security applications include the advanced management and reporting capabilities of McAfee ePolicy

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Phillips 107T / 107B / 109S / 109B	$218 / 254 / 344 / 384
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Flat, bright... getting affordable
Continued from page 34

istic alternative. Most manufacturers offer optional wall mounting hardware with their flat panels. In tight areas like crowded home offices and student bedrooms, the space saving alone can be enough to justify the extra cost.

The testing

We've tested both analogue- and dual-input models because digital video cards aren't as popular as analogue versions (yet). Some of our test samples have both digital and analogue inputs. On these models the cleanliness of digital signals was quickly obvious

We ran each through DisplayMate Technologies' (www.displaymate.com) Obstacle Course several times. This test puts monitors through a level of stress that practically nobody would put a monitor under in real-world conditions. It tests how well a monitor handles video signals sent from a video display adapter.

Initial tests were performed on an Athlon 1200 running Windows XP, with 256 MB DDRRAM, a Gigabyte GA-7DX motherboard, GeForce3 display adapter with 64 MB RAM, set to 1,280x1,024 resolution at 60 Hz. Unless otherwise noted, the same analogue and digital monitor cables were used each time

To see how well they handled different signals, we also connected each monitor to an old Pentium III system with an ATI Rage 128 adapter, running Windows 98.

If you're going to spend the extra dollars on a flat-panel monitor, you should have a quality video card. Connecting a quality monitor to an inferior display adapter defeats the purpose. During our tests we noted improvements in visual quality when certain models were connected to the newer GeForce3 adapter. This was evident not only during the Obstacle Course, but also in text readability and image contrast with word processing, spreadsheet, and email applications.

Most LCD manufacturers now offer three-year warranties. Previously, the backlight was often only guaranteed for one year.

While several flat panel display manufacturers are represented, only three actually tackle the complex and costly task of making the LCDs: NEC, LG, and Samsung.

Tilt and swivel specifications were supplied by manufacturers

Apple Studio Display

From Apple Canada www.apple.ca
Size: 17 inches
Input: digital
Warranty: 1-year (complete)
Price: $1,549

If you have a Mac, this is the monitor you'll want. The modern, clear plastic design we first saw with Apple's Cube has replaced the Tupperware-like design of the company's older flat panels—one of which took home our Editor's Choice award two years ago.

On the back of this model are two USB ports, ostensibly for delivering power to Apple Pro speakers. Tilt is accomplished by positioning the spring-loaded support on the back, which will fold flat.

There are no OSD controls other than Brightness (digital signals shouldn't require any adjustment)

The Apple digital video connector differs from PC digital connectors, so we were forced to use a digital adapter Made for PowerBook and G4 users who want to connect a second VGA monitor or projector the adapter is digital only—we were unable to test this monitor on an analogue card.

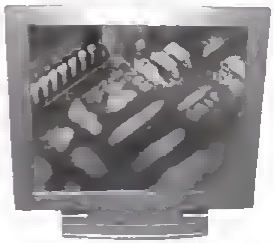
If you want to attach the Studio Display to any non-Apple system, you'll need this $30 adapter It measures 12.5x12.5x3.7 cm and requires power and a USB port.

Performance, even through an adapter, was admirable.

Cornea Systems MP704

From: Cornea Systems www.corneasystems.com
Size: 17 inches
Input: Analogue
Tilt: -2 degrees, +90 degrees
Warranty: 3 years (complete)
Price: US$540 (first-year advance swap available)

The base of this display folds up and inside the back so flat that we wondered if they'd forgotten to send a base when we opened the box



The OSD controls are centered under the display and clearly labeled. Once invoked, they are simple to understand and can be easily manipulated. A 3.5-cm black bezel surrounds the display.

Like several of the analogue only models, a significant amount of noise was apparent during full-resolution tests. Changing video cards offered little difference in performance

Cornea gives buyers the opportunity to swap their monitor for a better one by just paying the difference during the first year after purchase

IBM T750 SB

From: IBM Canada, www.ibm.ca
Size: 17 inches
Input: Analogue/digital
Tilt: -4 degrees, +41 degrees
Swivel: -230 degrees, +90 degrees
Warranty: 3 years (complete)
Price: $1,449

Known for their quality, IBM components also have a reputation for costing a little more. Initially, we weren't going to include this display because of its price,

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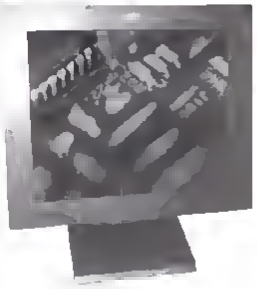
Flat, bright.. getting affordable
Continued from page 38



but that price dropped recently so the T750 fit nicely into our roundup

The display tilt hinge is at the bottom, allowing it to fold almost flat. Swiveling is accomplished via a circular platform in the base. While the bezel is large, at 4 cm, the black finish doesn't compete with the display for the user's eyes. OSD controls form little "waves" on the bottom right corner.

A very thorough six-language user guide, driver diskette, and all necessary cables came with our unit.

Connecting digitally improved test results noticeably over those achieved via analogue.

KDS RAD7C
From KDS Canada, www.kdscanada.ca
Size 17 inches
Input: Analogue
Tilt: 5 degrees, +20 degrees
Warranty: 3 years, 1 year (backlight)
Estimated street price: $969

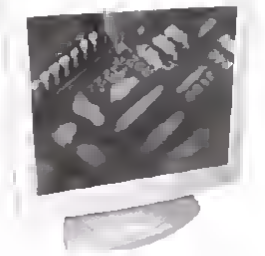
This model is an easy to assemble, two-piece unit, with blue side panels that hide the built-in speakers—allowing users to save even more desktop space. OSD controls are on the right, out of sight, yet easy to reach. Controls weren't initially intuitive, but an experienced user could figure them out after some experimenting. Reading the manual eliminated guesswork.

We found some noise and interference evident in the bandwidth test at full resolution. Most users would probably never notice, though. When connected to the ATI Rage 128, text appeared slightly grainy. This was improved by fiddling with the controls via the OSD.

If you're used to quality (read: expensive) full-size speakers, the small built-ins will sound somewhat tinny. Still, you can enjoy listening to CDs or Internet radio without the bulk and expense of a separate speaker system. If, when mixing music, the results sound good on these speakers, they will sound spectacular on everything else.

A 17 inch LCD with speakers costing under $1,000 seems like a lot of monitor for the money.

KDS RAD9
From KDS Canada, www.kdscanada.ca
Size 19 inches
Input: Digital/analogue
Tilt: 5 degrees, +45 degrees
Swivel: 90 degrees
Warranty: 3 years, 1 year (backlight)
Estimated street price: $1,599



The largest model we looked at, the RAD9 has a viewing area equal to that of a 21-inch CRT. It arrived in the box fully assembled, with a manual and all cables, including digital and analogue connectors. It swivels and tilts from the base.

The controls are hard to miss, planted squarely in the middle, just under the display. They are easy to adjust, with a menu, and plus and minus. In addition to the usual inputs, the RAD9 offers two

Continued on page 42

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Flat, bright... getting affordable

Continued from page 40

preset colour settings, one biased towards the blue spectrum, and the other towards green. These presets allow users to calibrate the screen based on what they think looks correct.

For such a large monitor, surprisingly little visual noise was apparent at full resolution on analogue, and none when connected digitally. Nor was there much difference in the images obtained from both the ATI and GeForce3 cards.

LG Flatron L1800PK

From: LG Canada, www.lg.ca
Size: 18.1 inches
Inputs: Digital/analogue
Tilt: -5 degrees, +30 degrees
Swivel: 90 degrees
Extras: Pivot, adjustable height
Warranty: 3 year (complete)
Estimated street price: $1,599

This model sits on a wing-shaped base that can be includes an 8-cm height adjustment. Users can also change between landscape and portrait modes, making this display a good choice for multimedia professionals. It also has three USB ports in the rear of the base. A

1 8-cm bezel surrounds the display.

Another plus is the absence of any transformer in the middle of the power cord. A traditional PC power cord plugs into a traditional PC power cord input on the display. A 50Hz 220 volt supply cord was included. Pivot Pro and driver software are on CD, as is the Quick User's Guide.

OSD controls are in the centre bottom, and are labeled and easy to decipher. The L1800PK sailed through the DisplayMate Obstacle Course digitally, but encountered severe noise at full resolution when hooked to the ATI analogue adapter.

By the time you read this the L1810B will be in stores, with the same warranty. With a standard 2.3-cm silver bezel and lacking the height adjustment, pivot, and swivel of the premium L1800PK version, estimated street price is expected to be $1,499. Both models come in ivory and black.

LG is one of three manufacturers of LCDs; it's possible other models we tested contained LG panels.

NEC MultiSync LCD1850E

From: NEC Canada, www.nec.ca
Size: 18.1 inches
Inputs: Dual analogue
Tilt: 5 degrees, +30 degrees
Swivel: 270 degrees
Warranty: 3 years (complete)
Estimated street price: $1,349

Our model was beige (NEC company literature calls it white) but this unit is also available in black. The OSD controls are 7-mm buttons on the front bottom of the display that are easy to manipulate. The entire base swivels on a circular pad mounted on the bottom. While input is analogue only, there are two of them.

Test performance on the GeForce3 was excellent for an analogue-only monitor. However, on the ATI Rage we witnessed a lot of noise at full resolution—which won't be an issue for most users.

NEC includes a software bonus for those concerned about shrunken desktop icons when video resolution is at the highest setting. Portrait Displays LiquidView lets users scale icon size without affecting display resolution.

While this unit doesn't have a pivoting base, Pivot software is included, probably for wall mounting. Also included are standard power (no bulky transformer) and video cables, and print and CD versions of the manual.

NEC Mitsubishi is one of three manufacturers of LCDs; it's possible other models we tested contained NEC panels.

Samsung SyncMaster 181T

From: Samsung Canada, www.samsung.ca
Size: 18.1 inches
Inputs: Analogue/digital
Tilt: 5 degrees, +30 degrees
Swivel: 355 degrees
Extras: Pivot, adjustable height
Warranty: 3 years (complete)
Estimated street price: $1,599

The latest 18 inch model from Samsung has an attractive 1.8 cm, silver border. Tiny (2x18 mm), yet functional display adjustment buttons are on the bottom centre of the panel. The compact black base adjusts 4 cm vertically, and the display tilts forward and back.

The Samsung driver's maximum resolution is 1,280x1,024 at 60 Hz, but the 181T seemed to enjoy the testing process. Without the drivers, we cranked up the resolution to 1,600x1,200. The results were a little stretched, though, like watching old movies on TV, where the characters appear taller and thinner.

The manual and software CD includes Natural Color for calibrating hues and shades. While the bulky transformer is noticeably absent, the power cord is a three-opening type, similar to those seen on other appliances.

Samsung is one of three manufacturers of LCDs; it's possible other models we tested contained Samsung panels.

TTX 9174

From: TTX Canada, www.ttx.ca
Size: 17 inches
Input: Analogue
Tilt: -5 degrees, +15 degrees
Warranty: 3 years (complete)
Estimated street price: $1,039

TTX has been marketing monitors in Canada since 1985. Our 9174 version was beige with a large (6 cm) bezel. This model is also offered in black as a standard desktop monitor, and in open

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845 GIVE ME 533

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Flat, bright... getting affordable
Continued from page 42

frame versions for use in kiosks. Resistive and capacitive touch screen versions are also available.

A user's guide and cables accompanied our sample. Five 13-mm buttons on the front bottom right are the OSD controls. Testing revealed some visual noise at full resolution, particularly on the older ATI adapter. We lowered the brightness and played with the contrast to get readable text on the ATI system. On the GeForce3 this noise dissipated as brightness was increased.

Viewsonic VX800
From Viewsonic, www.viewsonic.com
Size: 18.1 inches
Inputs: Analogue/digital
Tilt: 45 degrees
Warranty: 3 years (complete)
Price: US$929

Our unit arrived with analogue, digital, and audio cables. The power cable is three conductor type, with the transformer in the middle. A power cable for use in 50Hz 220-volt countries was also included, as was a Quick Start Guide and software.

A 4-cm silver bezel surrounds the display, with OSD controls measuring 2x7 mm at the bottom centre. Built-in

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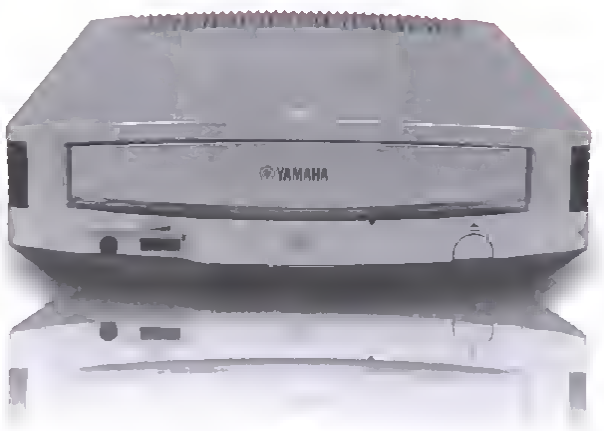

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YAMAHA

Norton suites a good upgrade for OS X

Continued from page 34

X before it told us to restart from the CD, although Norton Antivirus 8.0 did work well running in OS X. The included Retrospect Express 5.0 worked well in OS X and was a welcome addition to the suite, but the Disk Warrior Recovery Edition was not very useful (probably wise as the full version Disk Warrior is Norton's competition).

We also noted instability in OS X with systems on which we installed the System Works suite. Symptoms ranged from Kernel Panics (the OS X equivalent Blue Screen of Death) to not waking from sleep. In all cases, removing the Symantec kernel extensions resolved the problems, but then we could not run Norton Utilities from the hard drive.

We had no problem with Antivirus on any of our Mac test systems. The real problem with this suite is not that the products are bad, just that they don't offer much for owners of previous versions.

The SystemWorks 2.0 suite retails for $199 (there's a $50 rebate for owners of previous versions). However considering you will end up running the old version of Norton Utilities much of the time, it seems it would be better to purchase just the Antivirus 8.0 upgrade, which is US$39.95, then add on an upgrade to Retrospect Express 5.0 from Dantz (www.dantz.com) for US$19.95. This would allow you to run backups and Antivirus in OS X, and when you need to do disk maintenance just use your disc of the previous version to run Norton Utilities 6.0.

Hopefully Symantec (www.symantec.com) will improve the stability problems in Norton Utilities and give us a way to run the OS X apps from the CD in the next version. Until then, it seems there is no compelling reason for SystemWorks 1.0 users to upgrade.

Upgrades to Norton Utilities 7.0 are US$49.95, but if you already own version 6.0, we recommend hanging on to it and waiting until Norton Utilities 8.0.

Norton Internet Security 2.0

Norton Internet Security 2.0, much like it's sibling SystemWorks, is the first version of the package to be designed exclusively for OS X. And, much like SystemWorks there seems little reason to upgrade unless you are an OS X user.

Norton Internet Security 2.0
From Symantec, www.symantec.com
Estimated price: $159 ($50 mail-in upgrade rebate)

The disc does include a version of Internet Security 1.0 for users of OS 8 and 9, which might be useful if you are looking for the previous version but have found it's out of print. Internet Security 2.0 includes several pieces of software that are normally sold separately. Antivirus 8.0, Personal Firewall 2.0, Norton Privacy Control, and Aladdin iClean.

Antivirus 8.0 works well, but as mentioned in the SystemWorks review, you can only run it with OS X. OS 8 or 9 users will be running Antivirus 7.0 (the version you can run from the included bootable CD).

Norton Personal Firewall is a simple-to-use software firewall that protects users of cable or DSL from external attack over the Internet. If you connect via modem it's not as useful because you get a new IP every time you dial up. As well because you're not connected around the clock, you're system is less vulnerable to hacking.

Personal Firewall is ideally suited for one-computer households since it doesn't provide the NAT or DHCP functions hardware firewalls provide. If you do have multiple machines in your home, a hardware firewall is a good investment since it will allow you to share one high-speed connection with multiple machines. Hardware routers have fallen in price recently, with very good models available for less than $150, and as an added bonus they don't take up CPU time or RAM on your computer.

Personal Firewall worked well in our tests but it's worth noting that OS X does

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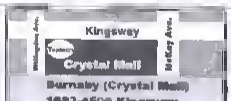

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Sony MD offers alternative to MP3

By Emma Townsend

It was 10 years ago that Sony launched the 7 cm magneto-optical MiniDisc (MD) format in Japan. In 1994, there were three brand-new MD products on the North American market: a portable music player/recorder, the MD Electronic Book, and the small MD Data removable media drive, all of which sold for around $800 each.

Sony Net MD Walkman MZ-S1
From: Sony, www.sony.ca
Requirements: Windows 98/2000/Me/XP
Street price: $329

Much as I liked the idea of e-books, I thought the MD unit had too small a screen, and I didn't like the ATRAC 5:1 compressed audio on the MiniDisc recorder/player. My thought was that if any of these products would survive, it would be the MD Data drive, once the price went down.

However, neither the MD Data drive or the MD e-book survived the year. But a curious thing happened with the MiniDisc as an audio format: the compression technology improved or maybe we just got used to hearing compressed audio by way of a little something called MP3. Either way, the result is that the MiniDisc audio format has been quietly gaining in popularity, as it combines the best aspects of CDs (durability, random access) and MP3 players (rewritability, selective track deletion, small player, and media size) while adding a few of its own (track split/combination functions, permanent track reordering). Best of all, the media is stunningly cheap: a blank 80-minute MD can be had for as little as $3, compared to $55 for the 64 MB SmartMedia card required to hold a little over an hour's worth of decent audio in many solid state MP3 players.

MD recorders only suffered from one long-standing problem: while you could record from any audio source using an optical cable or a standard audio connection, you had to do so in real-time. That was just so, well, analogue.

Sony's solution is Net MD, a method whereby audio is downloaded from a PC to a disc through a USB cable. Unlike an MP3 player, the actual file isn't transferred; the audio is encoded on the MD like any other recording. The upshot is still the same, though, rather than waiting over an hour to transfer Massive Attack's *Mezzanine*, I can get it done in 37 minutes. That's not as fast as transferring to an MP3 player—thank the MD's slower write speed and the need to convert to ATRAC first—but it's definitely an improvement.

Recording in one of the two available MiniDisc long play (MDLP) modes drops the total convert/record time down to just under 11 minutes, though some audio quality is sacrificed.

Sorry, let me back up a little here: MDs can be recorded in one of three speeds: standard play (SP) and two long play modes, LP2 and LP4 (not all MD players recognize the LP modes, trying to play an LP track on a non-MDLP unit just gives you silence). SP, LP2, and LP4 are 132Kbps, 105Kbps, and 66Kbps respectively, though those values aren't really analogous to MP3 as they use a different algorithm.

The particular MiniDisc player/recorder model that I received

was the MD Walkman MS-Z1, Sony's first sports model. Naturally, it has the usual sports-Walkman waterproof coverings and anti-skip protection. But in terms of audio transfer functions, there's no difference between the MS-Z1 and the other MiniDisc players that use Net MD or MDLP. (Other models include the MZN707 at $399 and MZN1 at $599.)

The Sony models use two pieces of bundled software for audio transfer: OpenMG Jukebox 2.2 and Net MD

Continued on page 88

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ECS SEM(266) Motherboard
256MB PC133 RAM
3D Video onboard 32MB shared
IBM 40Gi7200)Hard Drive
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3D Speakers 180W
Alpha 17" ATX Case 300W
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ECS L4S5M P4 Motherboard
256MB DDR266 RAM
ATI Radeon 7500(OEM) 64M Video
Maxtor 40G(7200)Hard drive
Panasonic Floppy Drive
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Internet Keyboard
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256MB DDR333 RAM
MSI GF4 Ti4200 128M Video
Maxtor 60G(7200)Hard drive
Panasonic Floppy Drive
Sony 16x DVD
SB Live 5.1 Sound Card
Altec Lancing AVS500 speakers
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ATA133 IDE Card, Promise 69
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ATA133 IDE RAID Card Promise 139
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PCI USB Adaptor Ver1.1/Ver2.0 19/39

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Aopen GeForce4 MX420/440/480 89/129/199
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ATI All-in-wander Radeon7500 64M(OEM) 269
ATI All-in-wander Radeon8500 128M(Retail) 479
ATI Radeon 8500 128M(retail) 285
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ATI (OEM) Radeon7000 64MB SDR Dual head 65
ATI (OEM) Radeon7000 64M DDR Dual, DVI 78
ATI(OEM) Radeon7500 128M DDR Dual, DVI 125
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Forsa GF4 64M DDR-TV MX420/MX440 89/109
Leadtek GF4 Ti4200/4400/4600 258/425/525
MSI GeForce3 Ti200 128M DDR VIVO 200
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Celeron 1.1/1.2/1.3G 99/109/119
AMD Duron 950/1.1/1.2/1.3G 66/89/99/109
XP 1800/1900/2000/2100 165/215/285/315
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AMD TB 950/1.1/1.3/1.4G 85/109/109/139
XP 1600/1800/1900 109/149/195

MEMORY

DDR 266 256/512M(OEM) 77/145
DDR(266)128/256/512M(NameBrand) 41/79/155
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PCMCIA Ethernet DLink 10/100M 16bit/32bit 49/58
Hub Surecom 10M 5 ports/8 ports 25/35
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Switch DLink 5ports/8ports 65/89
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Router 4port, DLink/USR 109/108
Ethernet cable 5/25/50ft(10/100)/100ft 5/8/13/36/65

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Keyboard Fujitsu PS2/Tuch Internet USB 17/17
Keyboard MS Natural/Internet/Pro 38/28/46
Keyboard Logitech Internet/Chinese 24/28
Keyboard French/Japanese/Korean 18/19/18
Mouse 2 button/Scroll/Optical/4D Optical 5/7/15/18
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Cordless Keyboard & Mouse Logitech/MS 75/75
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ASUS P4T533 w/Lan for P4 259
ASUS A7V333/A7S333 for XP 185/109
ECS K7S5A/K7S5EM for XP 86/86
ECS L4S5M/L4S5MG for P4 93/109
ECS P6STMT for P3 w/audio, video, Lan 93
Epox 8K3A0/8K3A+RAID for XP 130/195
Gigabyte 8IRS333/8IEXP/8IEXP 129/175/229
Gigabyte 7VTXE+/7VTXH+/7VRX 129/149/138
Gigapro with CPU, video, sound, Lan, modem 115
Maxtron 4PTie Slot/Socket CPU video & audio 89
MSI KT3 Ultra/KT3 Ultra-ARU 126/185
MSI SIS645DX Max-E for P4 139
Shuttle AV18FT for P3 w/audio 89
Shuttle MV42N for P4 w/video, audio, LAN 98
VIA P4PA/P4PB for Pentium IV 139/149

MONITORS

LCD Acer 15"/BenQ 17" Speaker, USB 529/879
LCD NEC1550V 15" 569
LCD Samsung 151S 15"/171S 17" 579/938
17" AOC/Envision/Impression 103/183/178
17" Hansol 770ED Flat 0.25dp 217
17" AOC 7F-Flat 0.25dp 208
17" LG FT700B/795FT 275/235
17" NEC AS79A/S75F 213/235
17" Samsung 793DF/700NF 229/330
19" AOC 9Gli/9Kli 0.25dp 289/349
19" LG 995FT/915FT 415/475
19" NEC AS95F 379
19" Samsung 950B/955DF 315/389

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Samsung ML1250/ML1450 329/449

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Epson 1250/1640/2450P 145/199/575

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Aopen 24x10x40/32x12x48 68/83
Liteon 32x12x48/40x12x48 83/95
LG 24x10x40/32x10x40 69/88
Plextor 40x12x40/Yamaha 24x10x40 199/139
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DVD 16x LG/Pioneer/Sony/Toshiba 59/69/67/69
DVD 16x AOpen/LiteOn 55/55
DVD-RW Pioneer DVR A04SPK 529

Sound

16bit sound card/AOpen AW340 15/18
SB Live5.1 48
SB Audigy(OEM)/MP3/XGamer 96/137/137
Speakers
Transom 180W Stereo 7
Altec Lancing AVS300/500/ATP3 45/63/83
Creative PS1000/Inspire2.1/Inspire5.1 65/87/133
Jazter Silver LED with Wood Sub 55
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Flat, bright... getting affordable

Continued from page 44

speakers emitted a short beep tone when controls were pressed.

Even at full volume, the speakers weren't very loud, probably a good thing when working in close proximity to folks with different listening tastes. A mute button at the far left of the OSD controls is handy when the telephone rings.

Every time the unit came on, either on initial startup or from standby, it auto adjusted the display. This is a nice feature, unless you're in a hurry.

A small amount of visual noise at full resolution all but disappeared when connected digitally.

Editor's choices

Samsung SyncMaster 181T
LG Flatron L1800PK

We're giving the Editor's Choice award to these two entries: both are 18 inch displays that gave excellent performance in testing. Pivot and swivel are great added features.

We also are awarding two honourable mentions, at the same price point as the winners, the 19-inch KDS RAD9 serves up an extra inch of quality viewing space, but without a pivot feature. And we can't overlook the 17-inch KDS RAD7c, which includes speakers for under $1,000 ❑

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CREATIVE SOUNDBLASTER AUDIGY SOUND CARD
CREATIVE 5.1 SPKR SPEAKERS + SUBWOOFER
16x PIONEER DVD ROM
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D-LINK 530TX 10/100 NETWORK CARD
MICROSOFT INTELLIMOUSE EXPLORER
LOGITECH OPTICAL KEYBOARD
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NOVA 6

INTEL P4 1.8GHz PROC
MSI 6580 MAX ATX
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40GB MAXTOR 5400 RPM HARD DRIVE
MSI GEFORCE 4 MX440 64MB DDR WITH TV OUT
CREATIVE SOUNDBLASTER 5.1 DOLBY DIGITAL
CREATIVE 2.1 2416 SPEAKERS + SUBWOOFER
16x SONY DVD ROM
1.44MB PANASONIC FLOPPY DRIVE
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KEYBOARD AND MOUSE
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256MB SDRAM
40GB MAXTOR 5400 RPM HARD DRIVE
MSI 3D FX GEFORCE 2 MX400 32MB DDR WITH TV OUT
CREATIVE SOUNDBLASTER 5.1 DOLBY DIGITAL
CREATIVE 2.1 2416 SPEAKERS + SUBWOOFER
16x SONY DVD ROM
1.44MB PANASONIC FLOPPY DRIVE
D-LINK 530TX 10/100 NETWORK CARD
KEYBOARD AND MOUSE
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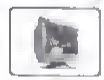

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StaticCORE

CD recorder puts end to 'mystery' discs

By David Tanaka

If you're tired of using felt tipped markers or those hard to print sticky labels to ID your custom CDs, check out Yamaha's latest CD RW recorder, the CRW-F1. It has a utility called Disc T@2 (tattoo, get it?) that etches text and images directly on the reflective mylar layer of a CD-R, creating a permanent record resembling a holographic image

CRW-F1 CD recorder

From Yamaha Canada Music, www.yamaha.ca/F1
Prices. $229 (internal), $349 (external USB 2.0), $399 (external USB2/FireWire)

Yamaha says Disc T@2 will allow companies to brand—and individuals to monogram—CDs by etching custom text and graphics directly onto the disc. The technology has a more mundane but practical use too, namely permanently recording a description of the disc's contents on its surface

The cost of monogramming is reduced disc capacity Any space Disc T@2 uses for graphics and text is not be available for data, so the actual reduction in capacity is variable, and depends on how much of the disc surface you use for graphics. Generally, you would put your graphics on the outer portion of the CD, leaving the inner rings for data.

Another minor detraction is that the image is only visible from the lower surface—the one you don't normally see—so users have to flip it over to see the graphics. The image shows up best on Azo coated (dark blue) discs The effect is less visible on cyanin (light blue, light green, or light yellow) discs, and all but invisible on gold-coloured discs.

Drive features

While the Disc T@2 feature may be the splashiest aspect of this new product, the hardware also represents the latest in Yamaha technology The rewriteable function has a rated speed of 24X, which Yamaha claims is 50 percent faster than the competition. The platter motor spins at 8,700 rpm. To dampen the vibrations that may be created by CD blanks—which, because they are mass produced, are not perfectly balanced—the recording assembly sits on a separate sub-platform that is isolated from the drive chassis by dampers.

The drive supports the Mt. Rainer CD RW specification, originally proposed by Compaq, Microsoft, Philips, and Sony. The aim of Mt Rainer is to make rewritable CDs as easy to use as floppies by providing support at the operating system level. Presently, a CD RW must first be formatted to a UDF format using a separate application.

Given Yamaha's prominence in music, it stands to reason that it would apply some of that expertise to audio recording, and in fact the CRW-F1 includes what Yamaha calls Advanced Audio Master Quality Recording. To increase the capacity of a CD, recorders typically increase the density of the pits they burn onto the CD's recording surface by making them smaller and closer together. However, the read heads of some cheaper CD playback devices aren't precise enough to discriminate the finer pattern, so can't play the CD, or exhibit playback errors (which is why a given CD may work in one playback device but not another)

The Advanced Audio Master Quality Recording technology maxes out the burn areas, in effect making a bigger target that even cheapo playback devices would be able to discriminate. The net effect is a CD with slightly lower record capacity, but usability across a wider range of playback devices without errors.

To help reduce coaster production, the new drive comes with an 8 MB buffer and SafeBurn, which Yamaha says eliminates buffer under-run errors. The CRW-F1 ships with a full version of Ahead Nero software for PCs (a favourite at *TCP*) and Adaptec Toast for Mac. The internal model will be available in late August, and the external models in September. ❑

Now serving: 75 CDs

When the KDS PC Controlled CD Organizer arrived, we didn't know quite what to make of it. A 75 CD storage unit is always useful, but having each tray motorized seemed a little over the top. However, once we hooked it up to a PC and loaded the CD library software, its usefulness in a number of situations became clearer

Like many others who have discovered the convemence of CD recording, over the past couple of years, I've burned a few dozen CDs worth of photos and data, which are haphazardly labelled and equally haphazardly stored. I could see how this unit could help me keep better track of these.

The CD Organizer software is a database application that offers a manual or automatic method of cataloguing CDs With the automatic method, you put a CD in your computer's CO-ROM drive. The software reads the disc's header information and file structure, assigns it to the next available tray in the storage unit, fills in the database record, opens the correct tray, then prompts you to insert the CD In the manual method, you choose the tray and fill in the database fields yourself

PC Controlled CD Organizer

From KDS USA, www.kdscanada.ca
Price. $169

There is a check out procedure, and any disc you've removed from the storage unit shows up in italicized type in the master CD list. Included with the check-out system is a lending menu so you can keep track of your favourite music CDs—you type in the name of the borrower and can assign a due date CDs on loan show up in blue type in the master list.

When you return a disc to the cabinet, the software asks you if it matches the database record, making sure you're putting back the correct CD in the tray This, of course, is the device's ultimate weakness. the trays are just a passive storage system because the software has no way of verifying that the database record matches the CD If you misfile a CD it won't catch the error All it can do is prompt you beforehand

In auto mode, the software does a complete job of reading all of the content on the CD, which it shows in a Windows Explorer-style split window It shows detail right down to the file level. (You might even be tempted to double-click on the file name to open it, but that would be futile since it is just a listing, not a shortcut to the file.

Now if in the next revision, the organizer software would prompt you to put the appropriate CD in the CD drive—something image-cataloguing programs already do—it would up the usefulness of the system considerably.

At $169, it seems pricey, but nevertheless the KDS CD Organizer is turning out to be a useful gadget—even with its limitations

—David Tanaka

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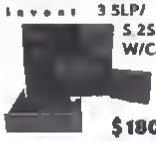

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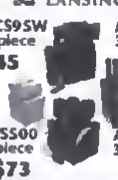

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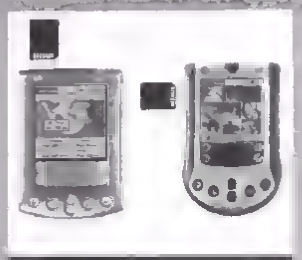
Palm: the original groovy gadget

Though Palm pretty much started the handheld category and has dominated it ever since, it has had some harder times lately part of its enormous market share has been eroded away by the Pocket PC devices, as well as by other Palm-based handhelds made by companies like Handspring and Sony. With the introduction of two new Palm devices incorporating a colour screen, Palm hopes to turn things around.

Both the m130 and m515 units are based on previous designs in Palm's m series the m130 adds a colour screen to the m125, as well as updating the operating system from Palm OS 4.0 to 4.1. The m515 is an updated version of the thinner m500, adding a colour screen and updating the OS to 4.1, but also bumping the internal memory up from 8 MB to 16 MB.

The new devices ship with a 65,536-colour TFT screen with a built-in backlight in for better visibility. They also both come with built-in infrared ports and a Lithium Ion battery that recharges when you drop the handheld into the USB synchronization cradle.



Palm m515 m130

From Palm Inc., www.palm.com

Estimated prices: $649 (m515), $449 (m130)

Both come with a MultiMedia Card/Secure Digital expansion slot, allowing you to store data or run additional applications—there is a fairly extensive line of plug-and-play applications available on MMC/SD for the Palm, including a games pack, e-books, dictionary/thesaurus travel applications (road atlases, travel books), and translation software. The expansion slot can also be used for hardware, such as Palm's own Bluetooth card (US$129).

The two devices differ in a few key ways. The most notable is size, with the m130 checking in at 12x7.9x2.3cm and 153 g, and the m515 at a more compact 11.4x7.9x1.3cm and 139 g. As stated above, the m515 has double the onboard memory of the m130, but it also comes with an upgradable flash ROM, allowing you to update the OS down the road. And while both have protective screen covers, the m130's flips up and the m515's opens up like a book.

Both come with a software bundle that includes: AvantGo Web Channel Manager, DataViz Documents to Go, MGI PhotoSuite Mobile, and Palm Reader (for e-books). Out of the box, both are compatible with both PC (Windows 98, 2000, Me, and XP) and Macintosh (OS 8.6 through 9.x).

Palm also offers a full range of accessories for the new handhelds, including a portable keyboard ($159), which folds up into a hardshell container only slightly bigger than a Palm device. The company also offers a number of SD cards with applications pre-loaded, such as the games bundle ($50) one of the Travel Cards series ($60 each, including Rand-McNalley's atlas), one of the e-book series of cards ($50 to $60 each), the Language Translator card (English, French, Italian, German, and Spanish, all for $60), the 8 MB Memory Backup card ($60) or the 16 MB Expansion card ($80).

There's also a Bluetooth card, currently available from Palm's U.S. Web site for US$130, which allows communication with the outside world through several Bluetooth-compatible phones, and which comes with a driver for use with the HP DeskJet 955c printer.

—*Sean Carruthers*

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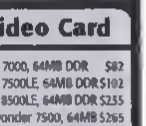

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Wish you were here

Tools to help you provide support remotely

By Emru Townsend

Stop me if you've heard something along this line over the phone before: "I have to reformat this document so that it has a red frilly border. I'm using PowerGizmo 3.0. Could you tell me how?"

Telephone support staff and consultants are no doubt nodding in recognition, as are those of you who've had to help out friends and family with little to go on but a mental picture and faith in the other person's communication skills. The best thing would be to go over there and demonstrate the procedure in person. (That's why smart IT support staff wear sneakers.) But that isn't always an option, leading to interesting exchanges like this one:

"OK, down near the left corner there's an icon that looks like a wrench. Click on it."

"The toolbar disappeared."

"You clicked the screwdriver! I said the wrench!"

"OK, I'll click the wrench now."

"Wait, you have to bring the toolbar back first."

"Hey, where did my work go?"

Unless you have a fondness for Tylenol, you can see why remote control software is so attractive. Symantec's pcAnywhere and Laplink's LapLink Gold are the latest iterations of old standbys in PC file transfer and remote control; the relative newcomers are Microsoft's Remote Desktop and Remote Assistance (both are part of the Windows XP operating system) and Expertcity's Web-based GoToMyPC.

All of these do essentially the same thing: they let you see and navigate another person's desktop directly on your computer—instead of hiking down to a different part of the building or trying to explain a complicated task over the phone.

The look and feel of the remote-control procedure, and even the terminology, is generally the same.

The computer being controlled is called the host and the controlling computer is the client or, logically enough, the remote computer. The remote user sees the host desktop either in full screen or as a resizable window.

Mouse movements and keyboard activity are passed to the host computer, though special key combinations like Ctrl+Alt+Del, Alt+Tab, and anything involving the Windows keys has to be handled specially. For instance, pcAnywhere asks if you want the keystrokes to go to the local or host computer, while GoToMyPC blocks them outright, but provides a menu option to activate the host's Task Manager. Otherwise, it's like being in front of the computer yourself. (However, the remote user's control isn't necessarily absolute. By default, the person on the host computer can still do whatever they want, which can lead to some amusing onscreen antics if the two aren't careful.)

All of these programs also include the ability to chat between the two computers.

The devil is in the details

The biggest differences between these applications lie mostly in setup, flexibility and other included functions. LapLink and pcAnywhere are the two programs with the most features, including file transfer, voice chat, shared clipboards, the ability to reboot the host computer, and a plethora of connection options (modem, direct cable, network, and Internet). They work the same way: run the program on the host computer, then run the program on the remote computer to connect.

Both programs also have security features such as encryption, customizable file sharing rights, and keyboard and mouse locking. LapLink, the Methuselah of the group (it started life 15 years ago as a DOS file transfer utility), comes out on top by including a synchronizing utility, printer redirection, and the ability to connect to or from a computer that isn't running LapLink.

LapLink has a pretty good balance between features and ease of setup. Although configuration can be a little tedious, the various options are very straightforward. The manual is clearly written and diagrammed, though it doesn't tell you how to turn off the omnipresent online help (the big question mark on the toolbar kills the automatic popups).

In comparison, pcAnywhere lags a little in features and ease of setup—there are just a few more hoops to jump through, and the manual isn't quite as user-friendly—but is otherwise almost identical in practical terms (even in its flaws: although you can customize the bit depth of the host desktop image to speed up screen updates, the image isn't antialiased—making some of the text hard to read if the window isn't full-screen). PcAnywhere's biggest advantage is its pricing scheme for one-time jobs: a 30 day licence can be had for peanuts (and fully refundable peanuts, at that—if you later decide to upgrade to the full package, you get the 30 day licence fee back).

If you're just looking for remote control and don't need the other bells and whistles you might consider Windows XP's Remote Desktop. Although it's free (it's part of XP Professional, though the remote computer only needs Terminal Services installed, available in any post-Windows 95 Microsoft operating system), there is a price to pay: setup requires you to be familiar with setting up Web services. If you're not, the convoluted online help makes you long for the old days of tree-killing paper manuals.

Return to the simple life

Remote Assistance setup, part of Windows XP (Home or Professional) is the exact opposite of Remote Desktop's infuriating complexity. In fact, Remote Assistance was easily the simplest and quickest of the programs to get up and running. Both parties set up a chat in Windows Messenger; the person on the host computer chooses the Ask for Remote Assistance option, which sends an invitation to the remote user; upon acceptance and confirmation from the host, the remote user controls host.

That's it. For quick and dirty connections it's hard to beat. The host desktop appears in a window (which, curiously, is anamorphic—if you resize it to a long, thin rectangle the desktop image is stretched like taffy) with a chat window on the left side. But again, there's a price to pay. Some things are too simplified: during a surprise disconnection Remote Assistance informed me that I should contact the person on the other end for more information. The trouble was, the person on the other end got the same message. Neither of us got any clue as to what happened. I also couldn't find anything to reassure me of Remote Assistance's security.

Marginally less easy to install, but far more satisfying to use, was GoToMyPC, a Web-based program. After signing up for an individual or corporate account, you download a small installer to the host computer, which puts a tiny GoToMyPC icon in your system tray. A remote user can then log in to your account from any computer via the gotomypc.com Web site, download a small application (Windows, Mac, UNIX, and Linux remote users are all welcome), and after providing the password they can take control of the host.

GoToMyPC is very well thought out; I never once had to consult the PDF documentation. Better still, it doesn't sacrifice capability for its simplicity. It includes many of LapLink's features, such as file transfer (though not as sophisticated), printer redirection, clipboard sharing, and lockout functions. Expertcity also uses AES 128-bit encryption for all data passing between its computers, and SSL encryption for its Web site. Another nice touch: the image of the host desktop is antialiased so well, my Microsoft Word screen was perfectly legible at 37 percent of its original size.

The choice is yours

Generally speaking, the world of remote access software is consistent enough that you know what to expect, yet diverse enough that you can make your choice based on which extra features suit your needs. One caveat: if possible, I would recommend testing these programs out on your systems. ❑

Emru Townsend (emru@pobox.com) based the sample dialogue at the beginning on true events.

LapLink Gold 11.0
From: LapLink, www.laplink.com
For: Windows 95/98/NT 4/2000/Me/XP
Street price: $199 (up to three computers)

Symantec pcAnywhere 10.5
From: Symantec Canada, www.symantec.ca
For: Windows 95/98/NT 4/2000/Me/XP
Estimated street price: $149 (host only), $249 (host and remote), $29 (30-day licence)

Expertcity GoToMyPC
From: Expertcity, www.gotomypc.com
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WHAT'S NEW

Continued from page 36

Orchestrator, which is used by some of the world's largest businesses, according to McAfee. The programs target companies with up to 250 employees.

Active VirusScan Small Business Edition includes VirusScan for desktop protection, NetShield for file server protection, and ePolicy Orchestrator for advanced anti-virus policy enforcement.

The Active Virus Defense Small Business Edition is more comprehensive. In addition to VirusScan, NetShield, and ePolicy Orchestrator, it includes GroupShield for email servers and WebShield for Internet gateway protection.

Pricing was not available at press time.

—TCP Staff

SpeedSite eases content management

North Vancouver, B.C.-based eBusiness Applications has launched a new service that it says will allow non-technical marketing staff to manage large Web sites—a task that previously required the skills of graphic designers and programmers.

The service, SpeedSite (www.speedsite.ca), was developed to provide a more efficient system of developing and maintaining corporate Web sites. It automates many manual, behind-the-scenes processes allowing non-technical staff to easily update text, add pages and insert images on corporate Web sites, says eBusiness Applications.

Targeted industries include graphic design, high tech, and the outdoor and sporting goods industries. Companies can contact eBusiness Applications (604-985-9287 or demo@speedsite.ca) for a demo of the software.

—TCP Staff

Fujitsu upgrades touch-screen portables

Fujitsu Canada (www.fujitsu.ca/) has upgraded two of its touch-screen ultra-portable lines, the LifeBook B Series and the LifeBook P1000.

The newest models in the B Series are powered by an 800 MHz Pentium III processor M, which runs faster, cooler, and extends battery life. They have a 10.4-inch XGA TFT touch-screen display

with anti-reflective coating, and measure 25x21.5x4 cm (9.92x8.5x1.26 in.) and weigh 1.35 kg (3 lb.) with the installed lithium ion battery.

The latest LifeBook P1000 is powered by a 733 MHz Crusoe TM5800 processor with LongRun power management. Models in this line measure 23x15.75x3.4 cm (9.1x6.2x1.36 in.) and weigh under 1 kg (2.2 lb.). They have an 8.9-inch wide-format XGA TFT touch-screen display with anti-reflective coating.

Both LifeBooks are single-spindle designs, but come with an external floppy drive (an optional CD-ROM drive is available). Each has a built-in modem and choice of either integrated WiFi-compliant wireless LAN or 10/100 Base-Tx Ethernet connectivity. Users have a choice of Windows XP Pro or 2000 Pro.

The new LifeBooks have a three-year limited warranty. The LifeBook B-2610 has a suggested list price of $3,889, and $2,649 for the LifeBook P-1110.

—TCP Staff

Corel previews Tablet PC application

Corel Corp. (www.corel.com) demo'd a prototype for a new application it has developed for systems running Microsoft's Tablet PC platform, at TechXNY in June.

According to Corel, the software, called Project Cotigo, is designed for workers in an enterprise setting who do most of their tasks away from their desktops.

In combination with a Tablet PC device, the software will allow them to transform sketches into precise graphical images with annotations from multiple users, via a collaborative workflow. The software can be navigated with pen-based interactions or via mouse and keyboard.

—TCP Staff

Apple acquires Emagic music tools

In early July, Apple (www.apple.com) announced its acquisition of Emagic, a developer of professional computer-based

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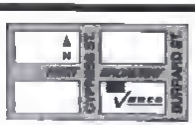

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Celeron 533/ 1.0A* / 1.1/ 1.2/ 1.3G	$69/115/119/115/139
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WD 5400 (ATA100) 20 / 40 / 80 / 120	$109/114/175/255
WD 7200 (100) 20 /40 / 80	$115/127/163
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SOUND	SB Live! Digital Output
SPEAKER	Digital with Sub
NET CARD	10/100
MONITOR	17" Color
SOFTWARE	MS WIN ME

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VGA	TNT2 M64 32M / On board
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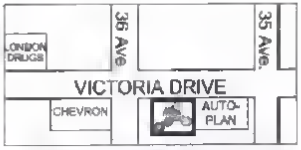

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Wish you were here

Continued from page 46

include a built-in software firewall as part of the UNIX underpinnings. There are also freeware/shareware utilities available on Version Tracker (www.versiontracker.com/macosx/) that allow you to set up and configure the built-in firewall, and it works just as well as Personal Firewall.

We did have one issue with Personal Firewall, the default configuration prevented us from reading Web discussion boards running on the vBulletin server software. For some reason it filtered out all the text in the posts, leaving only the date and the subject line. However, it is possible to correct this by changing some of the settings in the program. The user interface is very friendly and should be no problem for novices to learn quickly.

The other piece of software included in the suite is Norton Privacy Control, which can be set up to alert you when any important information is being transmitted to the Internet from your computer. You input any information you want it to look for—such as credit card numbers or phone numbers—and it then scans all outgoing data and alerts you if any of the entries you have made are found in the outgoing packets. Norton Privacy Control is a new feature, so there is no OS 8 or 9 version.

While we had no technical problems with the Internet Security suite we feel that for many people the best solution is a combination of Norton Antivirus 8.0 and either a hardware router or the built in OS X firewall. The Internet Security 2.0 is $159 Canadian (upgrades are $50 less, via mail-in rebate).

Since you must purchase a copy of the program for each computer in your house, if you have two or more machines on a high-speed connection, a hardware router is actually cheaper. Also, if you own previous versions of Antivirus, the upgrade to 8.0 is only US$39.95. The full version of Antivirus is $119. ❑

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Is that a GameBoy in your Palm?

By Geof Wheelwright

The idea behind software emulation is not new. Getting one computer to act like another has been common practice since the days of the IBM "plug compatible" Amdahl mainframe systems of the early 1970s.

What is new is that emulators are becoming commonplace on handheld computers. It is now possible to emulate the operation of handheld games systems such as the Nintendo Game Boy or the Sega Game Gear on a Pocket PC or Palm-based handheld. In addition, you can play classic games written for the home computers of yesteryear with Apple II and Commodore 64 emulators written for handhelds.

These emulators are designed to let you to take full advantage of the sound, colour and processing power of the latest handheld systems to play classic games. They are available from a wide variety of Web sites and come with cheeky names such as GnuBoy (which emulates the GameBoy on a Pocket PC) or ComeBack 64.

Emulators were given a rare official boost late last year with the news that Synovial Inc's Virtual Game Gear software (which allows a Pocket PC to emulate a Sega Game Gear) would be bundled with the Compaq iPaq along with three classic Sega games. Unlike most emulators, this one is actually blessed by the company that is the target of the emulation. Synovial has a partnership with Sega and sells other Sega Game Gear titles for iPaq users from its Web site for $15 to $20 per three-game set.

Emulators were given a rare official boost late last year with the news that Synovial Inc's Virtual Game Gear software would be bundled with the Compaq iPaq along with three classic Sega games.

This emulator works well, is relatively stable and provides iPaq users with three highly entertaining classic games. It's hard to say, however, whether or not those games will prove attractive enough to get users to actually spend money downloading further emulated games.

Most emulators, however, have no such official relationship with the products they are emulating and still exist in the more buccaneering "Wild West" parts of the Web. They tend to either be freeware or shareware—and can be prone to crashing or freezing up.

They fall into two categories: those built by real aficionados of classic videogame and home computer systems (such as the Atari 2600, Commodore 64 or Apple II emulators) and those that exist solely to let people rip off games from existing current handheld games systems (such as the Nintendo GameBoy and GameBoy Advance emulators).

If you just want to be able to play some of the old games you enjoyed in your youth, then the first breed of emulator will appeal to you—and you should have no problem finding software, as a good deal of older software is now in the public domain. There are lots of card games, chess games, strategy and adventure games available on the Web that were originally written for the Commodore 64 or Apple II, systems that are technologically stone-aged compared to the power you find in the average handheld system of today. So when you run these games using an emulator on your handheld, they tend to perform well and do not put any real strain on the resources of the system.

The latter category of emulator, however, is more resource intensive and of greater moral questionability. While you can find these emulators all over the Web, if you want to find copies of current GameBoy titles for use with them you will typically have to look for them on file and swapping services such as Morpheus. And you can be quite sure that these titles are not in the public domain and use of these downloaded copies does represent piracy.

For most users, use of an emulator on the handheld computer is likely to be a bit of fun, and maybe a way to relive fond memories of all the games played on their first home computer. ❑

Backpack Bantam burner gains USB 2.0

The "Triple Play" in the product name stems from the fact that this device can connect to a computer [illegible] three interfaces: parallel port, PC Card, or USB 2 [illegible] is backward compatible to USB 1.0). Everything required to make these connections [illegible] the box.

Microsolutions has been making innovative portable products for some time and this CD-RW drive is distinguished from previous generations not only by the addition of USB 2.0, but by its rated [illegible] speed of 24X. It has the same tight, slim form factor as other Backpack Bantam drives, and the same quality.

Backpack Bantam Triple Play
From Microsolutions, www.micro-solutions.com
Estimated retail price: $399

The company claims the following throughput speeds for each mode of connection supported: Mbps for USB 1.0, 1.2 Mbps for parallel port, 2.5 Mbps for PC Card and 3.6 Mbps for USB 2.

With these throughputs, the write/rewrite/read speeds will be 6X/6X/6X for the slowest [illegible] (USB 1.0) and up to 16X/16X/24X via USB [illegible].

I had a chance to compare this drive with an older Bantam model that connected via PCMCIA. I connected [illegible] to a 600 MHz system with 128 MB RAM, while the Triple Play drive was connected via USB 2.0 to a 700 MHz Pentium [illegible] with 128 MB RAM.

Formatting a blank CD-RW for UDF took 48 minutes on the older drive and just eight minutes on the Triple Play—dramatic, even considering the difference in processor power.

Less dramatic, but notable, was the time it took to master a CD with 10 MB worth of text files (not in UDF, but as a true data disc): just under three minutes on the older machine, but so fast with the Triple Play that I had to double-check the disc to make sure it contained the data, which did. The Triple Play was undeniably faster than the older drive.

On the down side, however, the bundled proprietary Backpack UDF software was somewhat less than instinctive to use and proved troublesome in its dictatorial demands over the whole computer system. I was told by Microsolutions' technical department that an upgrade to improve some the shortcomings is already available at the company's Web site.

It is only fair to point out, though, that the cock-ups are apparently more attributable to how UDF works than to the approach taken by any particular developer. I have had similar problems with other UDF utilities (Adaptec DirectCD, for example).

One [illegible] detract [illegible] portability is the fact that the Triple Play requires a separate AC adapter which necessitates carrying a [illegible] little block and associated cables along with the one for your computer. Some portable drives relieve us of this burden by drawing power from the computer (which, granted, can significantly reduce battery life).

That said, the Backpack Bantam Triple Play is the most attractive portable CD-RW drive I've encountered—even without the impressive USB 2.0 capabilities. It's slim [illegible] 54x15.2x21.6 cm), light (560 g), and works exactly as advertised. The estimated street price is slightly higher than other drives, but the connectivity and completeness of the package more than compensate for the extra dollars. Definitely a serious contender for portable users looking for an external optical drive.

—Ross MacDonald

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OverClock 1.6GHz to 2.6GHz

In-store Demo on sale

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XP2000+....$1118
XP1900+....$1058
XP1700+....$998
XP1600+....$968
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-AMD Athlon XP 1800+ CPU
-MSI KT333-Ultra AMD Main Board
-256MB PC2700 DDR333 Memory
-nVIDIA GeForce4 MX440 64MB + TVO
-Panasonic 1.44MB Floppy Drive
-On-board ATA133 Controller
-40GB ATA133 7200RPM HD Hard Drive
-16X DVD-ROM w/ 48X CD-ROM
-40X24X10 CD-RW w/BurnProof
-Sound Blaster Audigy
-One IEEE1394 Firewire Port
-10/100 Ethernet
-SONEX 18" CASE w/300W PS & USB
Altec Lansing AVS300 2.1 Subwoofer
-107 W96 Keyboard & Wheel Mouse

Same Configuration For Intel P4 !
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P4-400FSB-1.6G/1 8G/2 0G.... $1099/$1138/$1189
P4-533FSB-2.26G/2 4G/2 53G $1289/$1529/$1879

XP@GameStation

$888

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XP2000 $808
XP1900 $828
XP1700 $868

Summer Special Free Upgrade to AMD XP 2000+ CPU & 60GB 7200RPM ATA133 HD
***Ask Sales for free upgrade condition!

AMD XP1900+
-Asus / MSI 8K755 DDR333 Board
-256MB PC2100 DDR (3GB Max.)
-nVIDIA GF4 MX440 64MB 4XAGP
-Panasonic 1.44MB Floppy Drive
-40GB ATA133 7200RPM Hard Drive
-16X DVD-ROM w/ 24X CD-RW
-Sound Blaster Live 5.1 Sound
-10/100BT Ethernet
-18" CASE w/300W PS & USB
-Altec Lansing AVS300 2.1 Speaker
-107 W96 Keyboard & Wheel Mouse
-3 Years System Limited Warranty

P4 GRAPHIC STATION - P6166 BAREBONES

$1699

2.53GHz 533FSB - $2339
2.40GHz 533FSB - $1999
Samsung 19" 955DF DynaFlat .2mm $339 w/ this system package only

Intel P4 2.26GHz
-Asus P4T533-CL i850E
-PC1600 512MB RAMBUS
-Radeon 7500 128MB DDR Twin
-60GB 7200RPM HD / 1.44MB FD
-48X32X10 CD-RW w/ BurnProof
-10/100BT LAN / 4 USB 2.0/Sound
-180W PMPO SubWoofer Speaker
-18" CASE w/ Enermax 350W PS
-Microsoft Wireless Keyboard
-Microsoft Wireless Mouse
-3 Years System Limited Warranty

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XP@WorkStation

$888

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1.8GHz $808
2.2GHz $858
2.4GHz $1188

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*Ask Sales for free upgrade condition!

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-nVIDIA GF4 MX440 64MB 4XAGP
-Panasonic 1.44MB Floppy Drive
-40GB ATA100 Hard Drive
-48X24X10 CD-RW w/BurnProof
-Onboard AC97 Sound Codec
-10/100BT Ethernet
-18" P4 CASE w/300W PS & USB
-180W PMPO Speaker
-107 W96 Keyboard & Wheel Mouse
-3 Years System Limited Warranty

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Complete System with 3 Most Selling Games
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Athlon XP 2000+...$1798
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3 Years System Limited Warranty

AMD XP1800+
-MSI KT333 Ultra-ARU Main Board
-512MB PC2700 DDR 333
-nVIDIA GeForce4 Ti4200 128MB DDR
-Panasonic 1.44MB Floppy Drive
-2 x 60GB 7200RPM ATA133 - RAID 0
-48X48X12 CD-RW w/ BurnProof
-16X Ultra Fast DVD ROM w/ 48X CD
-Onboard 8 Channel Sound w/ SPDIF
-Creative Inspire 5300 5.1 System
-10/100BT LAN / 4xUSB 2.0 / 1.1 / 1394
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-Enermax 350W Power Supply
-MS Internet KB & Optical Mouse

Maxtor

60GB-$129
ATA133 7200 RPM 2MB Buffer
40GB ATA133 7200RPM $105
80GB ATA133 7200RPM $155
Promise ATA133 Card $59

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512MB - $149
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XP1800+ Volcano 9 Fan + Asus A7S333 ME
$265 / $459
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Space2000 Water Cooling KIT

AMD XP Intel P4 478
$259
Store Demo Available!

Aspire Turbo Gamer Aluminum $159

Large Side Plexiglass Window
2 Cooling Fans Included
10 Driver Bay | Side Handle
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48x12x48 CDRW $92
48x16x48 CDRW $179
32XCDR Disk(50) $19
Plextor 40X CD-RW $205
Pioneer A04 DVD-RW..$539

Hansol

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$219
Samsung 750S 17" $215
Samsung 753DF 17" $239
Samsung 955DF 19" $375

Bare-Bone System!

AMD Duron 1GHz Upgrade
ECS K7SEM-266 SiS730 Main Board
128MB PC133 168 Pin Memory
Onboard 32MB (Max) Video
AC'97 OnBoard Sound
Onboard 10/100BT Lan
18" Case w/300W PS
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P4 Celeron 1.7GHz Upgrade
ECS P4VXAD Intel 845 Main Board
256MB PC2100 DDR Memory
Onboard 32MB (Max) Video
AC'97 OnBoard Sound
Onboard 10/100BT Lan
18" Case w/300W PS
$359

P4 1.8GHz w/512K Upgrade
ECS 645 P4 Full Size Main Board
256MB PC2100 DDR Memory
GeForce2 MX400 64MB 4XAGP
AC'97 OnBoard Sound
2XUSB, 2XFirm USB
18" Case w/300W P4 PS
$499

BUDGET VALUE

AMD Duron 1GHz System
ECS K7SEM 266 SiS730 Mainboard
128MB PC133 168 Pin Memory
Onboard 32MB (Max) Share Video
Panasonic 1.44MB Floppy Drive
20GB 5400RPM ATA 100 HD
AC'97 OnBoard Sound
52X IDE CD ROM
Onboard 10/100BT Ethernet
18" 6 Bays ATX Tower w/ 300W PS
140W PMPO Speaker System
WSB 107 KB & Wheel PS2 Mouse
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XP1600+ (1.40Hz)....$468
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Duron 1.2GHz....$419
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Ask For Free Mandrake Linux 8.2 OS

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AMD Athlon XP 1800+
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256MB PC2100 DDR MEMORY
nVIDIA GF2 MX400 64MB Video
Panasonic 1.44MB Floppy Drive
40GB 7200RPM ATA 133 HD
AC'97 OnBoard Sound
40X24X10 Ultra Fast CD-Rewritter
Onboard 10/100BT Ethernet
18" 6 Bays ATX Tower w/ 300W PS
140W PMPO Speaker System
WSB 107 KB & Wheel PS2 Mouse
1 Year Limited Warranty
$629
Call for Onboard Configuration
*Ask Sales For 3Year Extended Warranty Plan

Athlon XP 2100+ $809
Athlon XP 2000+...$768
Athlon XP 1900+...$699
Athlon XP 1600+...$619

WORK PERFORMANCE+

Intel P4 1.7GHz Celeron
VIA P4M266 / SiS650 P4 Main Board
256MB PC2100 DDR (MAX 2GB)
32MB Max. 3D Video w/Open AGP Slot
Panasonic 1.44MB Floppy Drive
40GB 7200 RPM Hard Drive
OnBoard AC97 Sound
40X24X10 Ultra Fast CD-Rewritter
Onboard 10/100BT Ethernet
18" 6 Bays ATX Tower w/ 300W PS
140W PMPO Speaker System
WSB 107 KB & Wheel PS2 Mouse
1 Year Limited Warranty
$559
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P4 2.2GHz 512K....$839
P4 2.0GHz 512K....$769
P4 1.8GHz 512K....$699
P4 1.6GHz 512K....$669

120GB Video RAID Station

Intel Pentium 4 1.6GHz 512K
ECS P4VXAD VIA P4X266 Main Board
512MB PC2100 DDR (Max 3GB)
Radeon 7500LE 64MB DDR - Twin
ATI PCI TV Tuner VE for Video Capture
Onboard ATA 100 RAID
2x60GB 7200 RPM ATA100 HD on RAID 0
OnBoard AC97 Sound
48X32X10 CD-RW / 1.44MB Floppy
18" 6 Bays ATX Tower w/ 300W PS
Onboard 10/100BT Ethernet
140W PMPO Speaker System
WSB 107 KB & Wheel PS2 Mouse
3 Years Limited Warranty
$1155
P4 2.4GHz 512K...$1575
P4 2.2GHz 512K...$1315
P4 2.0GHz 512K...$1255
P4 1.8GHz 512K...$1195
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- VGA Cards
- Gaming & Sound Systems
- Monitors
- CD-R/RW/DVD/CD-RW
- Mice & Keyboards
- Networking NIC & Hub
- Speakers & Sound Cards

AOpen Monthly Specials:

P4 1.6GHz SlimPC - DVD/CDRW
Intel P4 1.6GHz w/512K
AOpen MX46 SIS650
256MB DDR (512Max)
Max 64MB Video / 20GB HD
DVD / CD-RW / AC97 Sound
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15" TFT / 1180x1024 .26 300:1 250nit/cd
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$2449 $50 Discount
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TM1400XV P4 1.7/20GB/128MDVD/14 1"....$2149
TM1613X P4 1.6Ghz/20GB/256MDVD-R/RW/15"....$2349
TM...3XV P4M 1.4/20GB/256MDVD/14.1....$2099

MEMBER Special Discount !

nVIDIA GeForce4 MX440 64MB....$109
Radeon 7500 128MB Dual/DVI/TV $129
ECS K7S5A SiS735 Main Board....$79
ECS K7SEM All-in-One....$65
PIONEER A04 DVD-R/RW....$569
Ext IEEE 32X CDRW....$239
Ext USB 20GB Hard Drive....$249
MSI GF4 Ti4200 128MB + VIVO $279
Sound Blaster Audigy OEM....$79
Logitech Wire KB & Optical Mice $119
Tekram ATA100 RAID PCI Card....$55

MOST ITEMS ORDERED BEFORE 1:00PM CAN BE PICK UP SAME DAY
AFTER 4:00PM SPECIAL ITEMS REQUIRE DEPOSIT IN ADVANCE

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(3) EXTEND 1 YEAR LIMITED WARRANTY TO 3 YEAR LIMITED SYSTEM WARRANTY AND VIA
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VISA MasterCard

[P4 Motherboards]

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ASUS P4T-E SiS655 P4 Main Board RAMBUS....$259
Asus P4B533-VM i845G DDR S/V/L....$172
Asus P4S533-IS/S645DX DDR / AUDIO / LAN....$168
ECS P4VXA02 VIA 533FSB W/ RAID & LAN....$139
Gigabyte 8I845B Sis645 + 3Video / LAN....$115
MSI 845E MAX-LR i845E DDR / RAID / AUDIO....$159
MSI 845E MAX 845E DDR / USB2.0 / SIS LAN....$158
MSI 845DX MAX-E DDR333 / ATA133 / AUDIO..$139
MSI 845ULTRA SIS645 DDR / ATA133 / AUDIO..$116

[AMD Motherboard]

Asus A7S333 SIS746 / DDR333 / ATA100 / AUDIO....$109
Asus A7V333-RAID KT333 / RAID ATA133....$219
Asus A7V333-X/333 / DDR / ATA133 / AUDIO....$116
ECS K7VTA3 KT333 / DDR333 / ATA133 / RAID....$139
ECS K7S5A SIS735 / DDR / SD / AUDIO / LAN....$99
ECS K7SEM SIS 6330 / SD VIDEO / AUDIO / LAN....$63
MSI KT333 ULTRA-ARU DDR 133/RAID USB 2.0..$169
MSI KT333 ULTRA DDR / ATA133 / AUDIO....$139

[Sound Card / Speaker]

5.1 Live 5.1 / 5.1 Audigy (OEM)....$49 / $69
SB Audigy MP3+ / X-Gamer Retail Box....$139
SB Audigy Platinum / Platinum EX....$265 / $355
ADpan AW840 4.1 / AW860 5.1....$22/$39
Aopen AW850-D w/Optical / AW540 OEM....$85/ $59
Creative Inspire 5300 5.1 / 5700 Digital....$136/$356
Creative Live Audigy 4.0/7.1 / 2.1 / 2.0....$79 / $49
Altec Lansing AVS300 / AVS400....$49 / $89
Altec Lansing 2100 2.1 / 4100 4.1....$129/$179

[DVD / CDRW / DVD-RW]

ADpen / LG / LiteOn 16X DVD ROM....$62
Pioneer / Sony / Toshiba 16X DVD ROM....$69
ADpen / LG 24X / 32X IDE CDRW....$75 / $89
Optiarc/fx 32X CD-RW w/ Burnproof....$79
HP DVD@CD DVD & RW WRITER....$729
LG 12X8X32 DVD/CDRW Combo Drive....$97
Plextor 24X / 40X Internal CDRW....$105 / $205

[nVIDIA Video Card]

MSI GF4 Ti4400 128MB DDR+VIVO+DVI....$489
MSI GF4 Ti4400 128MB DDR+VIVO+DVI....$359
MSI GF4 Ti4200 128MB DDR+VIVO+DVI....$275
MSI RDF3 Ti4200 64MB DDR+VIVO+DVI....$239
MSI GF4 MX460 64MB DDR+TVO+VIVO....$169
MSI GF4 MX440 64MB DDR+TVO....$139
MSI GF4 MX420 64MB DDR+TVO....$109
nVIDIA GeForce2 MX 400 64M / TVO....$99 / $79
nVIDIA TNT2 M64 32MB AGP....$49

[ATI Video Card]

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ATI Radeon AIW 8500DV 64 /128 MB....$378/$429
ATI Radeon AIW 7500 64MB DDR....$259
Radeon 7500 128MB DDR DVI / Dual / TVO....$139
Radeon 7500LE 64MB DDR DVI / Dual / TVO....$109
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Xpert2000 Pro AGP 32MB SD....$49
ATI Rage 128 32MB AGP....$49

[Networking / Modem Products]

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3COM 3C920C / Intel 810/ PRO Pro Ethernet....$53
3COM 56K PCI Retail Modem....$28 / $39
Linksys 1/4/8 Ports Router....$99/$119/$199
Linksys BEFEW11S4 Wireless 4 Port Router....$179
Linksys WUSB11 Wireless USB Adapter 2.5....$119
USR 4 PORT ROUTER W/ PRINT SERVER....$169
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Assembly Cable Cable15/25/50/100ft....$9/$11/$19/$29
Cable, Cat 5E 10/100BT Cable, Per 100ft....$39
5 Port PCI VF/D Modem/ADPEN SOHO FILM....$84 / $39
USR 56K V.90 PCI Fax / Voice Win Modem....$39
USR 56K V.90 Hardware Modem w/o Voice....$79

[Case / Power Supply]

Antec Plus580 / Plus580i / Plus1080....$188/$229/$249
Antec SL1080 / SX1000 / SX1200 Blue....$99/$109/$139
Lian-Li Aluminum PC61 Silver / Black....$215 / $229
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Samsung 17"753DF 18"956DF 24....$249/$369
Samsung 17" 763MB Magic Bright....$289
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Samsung 150T / 170T / 180T....$733 / 1238 / 1499
Samsung 151MP / 171MP....$1038 / $1499
Sony 17" G220P / 19" G410P 24....$449 / $699

[Controller Card & Misc]

Promise Ultra 133 TX2 2Channel PCI Card....$69
Promise Ultra 100 TX2 2Channel PCI Card....$43
Tekram DC395U PCI SCSI Controller....$69
USB To Ultra Raid Converter NEW!!....$69
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External 3.5" Bay USB 2.0 Rack for NB HD....$39
3Port IEEE 1394 Firewire / USB 2.0 PCI Card....$45
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[Printer & Scanner]

Brother 1230 / 1440 Laser Printer....$399/ $499
Epson C82 / C86 2880x720....$129/$229
Epson PHOTO 820 2880x720 8 cpl....$179
Epson P1280 2880x720 13"x44"....$729
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HP PSC 750 / PSC 950 Officejet Multi....$319 / $499
Samsung ML1210 600dpi / ML1250 1200dpi....$239/$339
Acer 430U 600dpi / 1240UT 1200dpi....$79/$169
Acer 630U 1200x2400dpi Scan to Web Scanner....$199

Treo nicely integrates PDA, phone

By Sean Carruthers

Since it introduced the first Visor handheld, Handspring has been Palm's major competitor in the Palm-based handheld space, and has snatched up a fair portion of the market just on innovation. Handspring introduced the Springboard slot for hardware/software expansion, causing Palm to counter with Multimedia Card/Secure Digital expansion slots.

Handspring Treo 180
From Handspring, www.handspring.com
Estimated price: $850 (less with service plan)

Handspring also introduced value-oriented models of the Visor, forcing Palm to introduce its own low-priced version. The Visor was also Mac-friendly right out of the box, and Palm had to do a bit of catch-up there, too.

Now, Handspring has incorporated a cellular phone component into its new Palm-based device, the Treo. It's worth noting that it wasn't even the first to do so (previously, we have looked at Kyocera's SmartPhone series, which accomplished the same feat), but the remarkable thing about the Treo is its size and functionality. It is a fully-functional cell phone/PDA that is as small as the smallest Visor or Palm units, and not a lot bigger than a cellular phone (something that couldn't be said for the bulky SmartPhone). In fact, the Treo even squeezes in a BlackBerry-like keyboard, so you don't have to learn Graffiti to make the Treo work.

The Treo is a dual-band GSM/GPRS phone, operating on the 900 MHz and 1,900 MHz bands in North America. (The Asian and European versions use 1,800 MHz instead of 1,900 MHz, which means if you're traveling abroad, you will only be able to use the North American version on the lower-quality 900 MHz band.)

Your identity is stored on a little SIM card, accessible through a little door on the back of the device—the advantage of this card, which is required by the GSM/GPRS protocol, is that when you upgrade your cellular phone, you just move the card, instead of having to reprogram everything.

So, how does it work? Well, the tiny keyboard is fairly easy to pick up if you have nimble thumbs, much like the BlackBerry (though it should be noted that this one has a slightly different layout for the non-alphabetic characters). The Treo defaults to phone mode, but you can get it into PDA mode fairly quickly using a control sequence on the keyboard, or by assigning one of the programmable keys. It also has a stylus, which you can use as you would with any other Palm.

We received our Treo from Rogers AT&T Wireless, Handspring's exclusive service partner in Canada. At present, Handspring hasn't completed the software that allows the Treo to take full advantage of the Rogers GPRS network, which means the Treo does not yet have full Web functionality. What it does have is SMS messaging already built in, allowing you to exchange short emails with other subscribers or email addresses in the outside world.

The key letter in SMS (short messaging service) is that first S. Longer messages may be truncated or lost. Until full POP3 email is available for the Treo, it's a good stopgap solution, though—and will reinforce the value of concision.

Our biggest problem with the Treo is the battery life. Even though this model features a monochrome LCD screen, the radio component sucks back battery power like any other cell phone, so you'll want to make sure you recharge it when you're not using it. It will be interesting to see how the battery life is affected when the colour screen version debuts later this year (although we were told that because it employs a more efficient screen technology, battery life on the colour model will be as good if not better).

As an organizer, the Treo acts like pretty much any other Palm PDA. It has 16 MB of onboard memory, uses Palm OS 3.5.2H, and comes with all the typical onboard software that version of the OS uses: phone book, memo pad, calculator, etc. The Treo can synchronize with your computer via the included USB cable, and it's compatible with both PC (Windows 98, Me, and XP) and Mac (OS 8.5 and later) right out of the box.

As a phone, the Treo works just fine. It's a bit wider than most cellular phones, but not so large that it becomes difficult to hold. You can dial using the small keys on the keyboard or using the on-screen dial pad, which features larger numbers. You can also set up a contact list and place calls by scrolling through your contact list with the jog dial on the side of the phone. If you'd prefer to leave the cover closed while you talk, a hands-free headset is included in the box. It also has a speakerphone option.

The bottom line: if you treat it as a cell phone and keep it charged at all times, the Treo is an excellent cell phone/PDA combination—and you won't have to carry both!

Handspring has already announced a colour version, the Treo 270, as well as the Treo 90, which is based on Treo design but without the phone portion. ❑

New Q-ink cartridges coming !!!
***For* EPSON Stylus C60 *and* Photo 820**

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EPSON Stylus 480SX/580 **$13.99/ea Black** **$15.99/ea Color** EMJ-013B/14C 480SX/580/C40UX	EPSON Stylus 777 **$18.00/ea Black** **$19.00/ea Color** EMJ-017B/018C 680/777/777	EPSON Stylus 880/880i **$13.99/ea Black** **$15.99/ea Color** EMJ-019B/020C 880/880i	CANON S400/S450 S600 **$10.99/ea Black** **$9.99/ea Color** CBJ-032/C/M/Y S400/S450/S600
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LG 915FT 19" monitor $465
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LG 32x CDRW $85
LG 32x10x40 CD-rewriter with 8M buffer &Burn-Proof includes software &cable

Liteon 32x CDRW $83
Liteon 32x10x40 CD-rewriter &Burn Proof with software &cable, or 40x12x48@$93

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Orange PC Card adds USB 2.0

Owners of all but the latest in portable computers will not have a USB 2.0-compatible port on their machines. That was the case when I was reviewing the Triple Play CD-RW drive on my Sony VAIO notebook. Luckily I had an opportunity to test Orange Micro's USB 2.0 CardBus adapter so I could get an idea of how quickly the CD burner copied data using the new, faster USB spec.

OrangeUSB 2.0 Hi-Speed CardBus
From: Orange Micro Inc., www.orangemicro.com
Supports: Windows 98/Me/2000, Mac OSX
Price: US$79

The CardBus adapter is a Type II PC Card that sports four USB 2.0 connectors. Physical installation is as easy as sliding it into your PC Card slot, but getting it up and running proved more problematic. Though it comes with a CD quick start guide to installing drivers from the disc, there are, in fact, no drivers on the disc. Actual driver installation is from Orange Micro's Web site. This was discovered following much searching and head scratching.

Once set up, however, the adapter worked as it should. One problem we encountered, though, is that it was not "hot swappable" as touted. A utility that ostensibly allows the removal and insertion of the adapter without re-booting did not work for us. Every attempt to remove the card froze the computer. New drivers, which are posted regularly on the company's Web site, will hopefully resolve this.

Unhappy too is the fact that the Orange Micro USB 2.0 CardBus requires its own AC adapter—although the potential power draw from four USB 2.0 devices may make that a necessity.

—*Ross MacDonald*

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Blended threats latest menace

Virus writers and hackers team up to target sensitive data

By Tom Venetis

Blended security threats are not entirely new to security watchers. Attacking a system from multiple fronts in a variety of ways is a tried and true tactic of experienced hackers and crackers. However, some of the latest blended security threats have a more sinister twist—the addition of malicious code.

Anson Lee, product manager for Norton Internet Security with Symantec Corp. (www.symantec.com) in Santa Monica, Calif. says this malicious code is designed to quietly compromise a system, allowing someone to inflict more extensive damage later on or to steal valuable information without detection.

"The old virus and worm methodology caused downtime," Lee says. "But in terms of blended threats, we are seeing the worlds of the hacker and the virus writer coming together. They are creating viruses that can do a lot more than your traditional viruses."

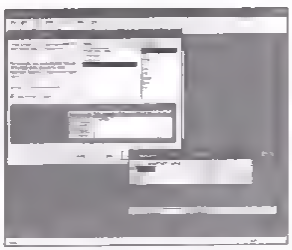
In fact, some of the most dangerous and malicious codes starting to appear as part of these blended threats effectively cover their tracks. This is important to

Continued on page 72

Making inroads with Access queries

The sole purpose of entering data into a database should be to someday get it out again. If you don't expect to extract data, there's really no point in taking the time to put it in. However, all too often the process of getting data out is harder than putting it in.

This month we'll look at more advanced queries for getting information from an Access database. We're assuming that you have some basic Access skills and that you can create a table and enter data into it. If you're new to Access, previous columns in this series, which are available online (www.CanadaComputes.com), will get you up and running. Check out "First steps with Access," "Relational databases" and, in particular, "Access data retrieval."



Crosstab queries can allow you to easily perform complicated analysis of your data

To follow the steps in this article, you'll need Access 97, 2000 or 2002.

We're using Access 2002 but you will get similar results using earlier versions of Access, although you may find some menu options and other choices are different.

Before you begin

To follow the tutorial you will need some sample data. I'll again use the data from the "First steps with Access" column—it's a simple table but has sufficient detail to create a range of queries. If you already have this file, add the last Yes/No field to it (this is new). If you don't have it, take a minute to create a table called

Continued on page 72

Mr. Forklift wins business makeover

During the past few months, you may have seen a poster in this magazine advertising a small business makeover competition, sponsored by Microsoft Canada and *The Computer Paper*. We're happy to announce the winner: Mr. Forklift of Concord, Ont. Over the next few months, we will be filing reports on the progress of the makeover.

Adam Columbus, owner of the 17-person operation, says he was surprised to hear Mr. Forklift was chosen, and looks forward to the server hardware and software, which is part of the prize package.

"I was frankly tired of being my own network administrator," says Columbus, who adds that his company is too small to have a dedicated network person on staff. As a consequence, he says he has spent "whole days at a time" troubleshooting and maintaining his peer-to-peer LAN.

And this is precisely where Microsoft thinks its Windows 2000 Small Business Server package will be able to help, says Scott Jackson, Microsoft Canada's product manager for Small Business Server.

"The small business owner wears many hats," Jackson says, adding that reducing IT administration is one of the strengths of Small Business Server. "There are lots of administrative tasks structured through simple, wizard-driven screens."

Mr. Forklift's peer-to-peer LAN consists of seven PCs—five running Windows XP and two running Windows 98. The LAN is connected to the Internet via DSL router.

The prize package includes server hardware, plus the Small Business Server package. Included in the package is Windows 2000 Small Business Server, Exchange Server, Internet security and firewall applications, SQL Server, plus the services of a Microsoft Certified Partner to assess and then install the system.

"If I could just reduce my problems, that's what I really want," says Columbus.

Mr. Forklift is a private company that sells, rents, and services forklifts. The company operates primarily in Southern Ontario.

—*TCP Staff*

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- 16x DVD-ROM / 1.44 Floppy
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- Altec 5 Pic Subwoofer System
- Microsoft Internet Keyboard
- Logitech Optical Internet Wheel Mouse
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- Creative Inspire 5300 5.1 Spkr Sys
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- Logitech Cordless Optical Mouse
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LG CDRW-DVD	$105
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Liteon 40X19X48 CDRW	$89
Liteon 48X12X40 CDRW	$125
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Asus MB P4T 533C	$259
Asus MB A7V333	$179
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Asus 6420 / 8440	$299/379
Asus 8540	$575
MSI GeForce-4 440	$139
SB Extigy Audio	$219

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Abit KX7-333 / KX7-333R	$159/179
Asus A7V 333 / Rikil	$199/229
Asus A7S-333	$109
ECS K7SEM w/AGP/Audio/Lan	$80
Gigabyte 7VTXH+ / VTXE+	$139/145
MSI KT133 Pro II / Pro II-RU	$135/199
P4 Motherboard	
Asus P4T-533-C / P4B-533	$259/209
Asus P4S-533	$159
MSI 6547 - 845EMAX2 LR	$121/199
Socket 370 (for PIII & Celeron II)	
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Samsung 790 / 900NF / 900NFT	$375/529/539
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Samsung 210T / 240T	$4095/7189
Sony 551 / 581	$709/1599
Viewsonic VE500 / VG151 / 181	$669/809/1089

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Win2000 Advanced Server 25 User	$2320
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Logitech Cordless / Print Mouse	$28/15
Microsoft Internet KB + Mouse Combo	$39
AOpen Win98 KB + Wheel Mouse	$20
In-Win Case	Pls Call or Visit Our Website

27/7/2002A

Blended threats latest menace

Continued from page 70

those looking to steal sensitive corporate information without tipping off anyone to exactly what they are doing.

A malicious bit of code can be buried in what looks an email virus. By the time the email virus is shut down, the malicious code has planted itself in the system and started to send out the files and information that were the real target of the attack.

"The folks that are out there creating these kinds of malicious codes are getting more sophisticated and that is manifesting itself in new kinds of code that can morph themselves each time they replicate or viruses that can have a different signature each time a copy is made," adds James Teel, director of security business management with 3Com (www.3com.com) in Salt Lake City, Utah.

"We recently saw an email from a hacker who guaranteed to write a virus that would have a unique and changing signature that would be non-detectable to most antivirus programs," he says.

Ken Nishidera, product manager for IP security services with AT&T Canada in Thornhill, Ont., says that one of the more disturbing things he has seen is how some of this code actively searches out other systems and servers undetected until it is too late.

According to Nishidera, the early NIMBDA and Code Red virus attacks showed some of these characteristics, "of being able to do such things as embedding worms onto systems and code into Web servers and shared files that allowed other systems to become compromised."

Multi-pronged solution

Because blended security threats can attack on multiple fronts and use malicious code, experts recommend that companies take a number of approaches to tackling the problem.

An antivirus program alone is no longer sufficient protection; it's now just a small part of an overall security plan that also includes an effective firewall. But more important than these two components, according to security experts, is an intrusion detection system that looks for operations or programs behaving in uncharacteristic ways.

Some malicious code tries to remove specific kinds of files from a system or to activate specific programs so that an outside party can connect to a network. An effective intrusion protection system along with a firewall will alert someone when it detects programs being activated without authorization and files being transferred to outside systems, or attempts to let an unauthorized outside system connect to a network.

In February, 3Com released its embedded firewall solution that works with its 10/100 Secure network interface cards (NICs). Teel says the advantage of an embedded solution is that it bypasses one of the biggest problems with security: the operating system.

Hackers and virus writers have proven that some of the latest operating systems are filled with security holes that they can exploit a number of ways, including using malicious code.

An embedded hardware-based solution is less likely to be compromised by a hacker and therefore more secure because it does not rely on the operating system.

In the future, Teel expects embedded firewalls will be a standard feature of systems and devices.

"The best means of protection is to push security policy enforcement out from the network and onto individual systems, like desktop and mobile devices," Teel says.

Symantec also has remedy for OS security vulnerabilities. Its Firewall/VPN appliance secures both inbound and outbound traffic, including Web, email, and FTP programs. It covers all of the security bases without being overly complex, making it especially welcome in small offices and businesses where the security and technical expertise is often minimal ❑

Making inroads with Access queries

Continued from page 70

Employee, with this structure and this data (don't worry about including the rule lines, they are used here for purposes of clarity only).

Field name	EmpNumber
Field type	number
Field name	FirstName
Field type	text
Field name	LastName
Field type	text
Field name	Department
Field type	text
Field name	Salary
Field type	number
Field name	Shareholder
Field type	Yes/No

EmpNumber	FirstName	LastName	Department	Salary	Shareholder
165	Jane	Smol	Accounts	50000	Yes
161	Susan	Smithson	Accounts	35000	Yes
153	James	Mathews	Sales	58000	No
159	Mary	Lau	Sales	55000	Yes
157	Wayne	Long	Service	48000	No
152	Kelly	Adams	Service	37000	Yes

Queries that do math

Often you'll need a query that does math for you. For example, if you were to give every employee a 10 percent pay increase, you'd want to know how much that would be. To create a query to make this calculation, click the Queries option in the Objects list and choose Create Query in Design View. In the Show Table dialogue, choose the Employee table, click Add, then click Close.

You'll create the query using the grid displayed in the Select Query dialogue. Add the FirstName and LastName fields and the Salary field to the grid. In the next empty column type:

Pay Increase: [Salary] * 0.1

In the column to its right, type:

New Salary: [Salary] * 1.1

Run the query to check the result. You should see each employee's current salary, their proposed increase and the new salary they'll be receiving. Notice that the text you typed before the colon becomes the column heading in the query window.

You may notice that the numbers for

Continued on page 76

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- PS/2 wheel mouse
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- Integrated 10/100 Network card
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- Integrated sound
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- PS/2 wheel mouse
- Integrated 10/100 Network card
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- 4 USB ports

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Princo 48X 80min 50pcs CD $18.5

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Intel Pentium 4 512K
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2.2/2.4G $398/648
AMD XP Retail box with fan
1700/1800/1900 $155/169/206
2000/2100 $250/370

Memory [Life time warrant]

DDR266 128/256/512M $38/58/132
RAMBUS 128/256/512M $69/135/354
SDRAM133 128/256/512M $38/65/124

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Maxtor	20G 5400	$95
	40G 5400/7200	$103/102
	60G 5400/7200	$129/132
	80G 5400/7200	$155/152
	120/160G 5400	$234/369
WD	20G 5400/7200	$101/113
	40G 5400/7200	$112/126
	60G 7200	$166
	80G 5400/7200	$169/179
	120G 5400	$255

Camera

Logitech Quickcam web $85
Creative Labs Webcam/ plus $47/78

Motherboards

Abit AT7 MAX /RAID AMD	$248
Abit KX7 333 AMD	$158
Abit BD7 /WA AMD	$130
Abit BL7 / BD7II S478	$129/194
Asus A7N266-C-WA AMD	$159
Asus A7N266 VM WA AMD	$124
Asus A7N266 WA AMD	$206
Asus A7S333-WA AMD	$109
Asus A7V266 C WA AMD	$126
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Asus P4S533-WA-WL S478	$168
Asus P4T-E WA S478	$220
Asus P4T533-C L S478	$263
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Gigabyte GA7VKML AMD	$106
Gigabyte GA7VTXEP AMD	$115
Gigabyte GA8IDMLC S478	$112
Gigabyte GA8IDX S478	$129
MSI MS 1045G/ 1845E S478	$178/206
MSI MS KT3 Ultra 333 AMD	$128
MSI MSI KT3 ARU 333 AMD	$174

Scanner

Acer 52W 4300U/ 5300U $76/124

Printer

Epson Stylus C42/ C60	$74/128
Epson Stylus C80	$229
Epson Stylus Photo 785EPX	$299
Lexmark Inkjet Z22/Z33/Z55	$64/94/198
Lexmark X83 Print/ Scan/ Copy	$245
Lexmark E210 Laser Optra	$284
Samsung ML 1210/1460 Laser	$208/448

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Hansol 720E 17" 24	$198
Hansol 17" .20 Flat	$216
Hansol 19 .20 DynaFlat	$368
Philips 107T 17"	$238
NEC AS70/ AS75I- 17"	$218/284
NEC AS90/ AS95I- 19"	$338/378
Philips 107T 17" Flat	$238
Samsung 955BF 19" .20	$379
ViewSonic F70 .27 17"	$233
ViewSonic F90F .25 17"	$244
Sony G220F 17" 24	$444

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NEC LCD 1550V 15"	$568
NEC LCD 1700V 17"	$943
Samsung 171S 17"	$928
ViewPanel VE170 17" LCD	$1069
Philips 170B2B 17" Ultraslim	$888

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Aureal vortex SQ1500	$18
Creative SB PCI 128/ Live! 5.1	$28/54
Creative SB audigy MP3+	$139

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USR 56K v.90 PCI Hardware	$86
AOpen 56K v.92 PCI	$22

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ASUS 32X12X40X CD RW	$99
LG 12X8X32X/ 8X DVD Combo	$108
LG 24x10x40x CD RW	$77
LG 32x10x40x CD RW	$84
LiteOn 32x12x40x CD-RW retail	$90
LiteOn 40x12x48x CD-RW	$106
Samsung 32x10x40x CD-RW	$92
Asus/ LG/ Sony 16x DVD	$75/64/73
Samsung / LiteOn 16x DVD	$65/65
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LG/LiteOn/Samsung 52x CDROM	$39

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DLink 5 PORT Hub 10 Base	$49
DLink 5 PORT Switch 100 Base	$68
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Realtek 10/100 LAN card	$14

Video Card

Asus V7100Pro GeForce2 MX400 64M	$118
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MSI GeForce4 MX460 64M/TV	$158
Abit T200 G2 MX200 32M/TV	$69
Abit T400 G2 MX400 64M/TV	$85
Abit G4 MX440 64M/TV	$138
Abit G4 Ti4400 128M/TV	$355
ATI Radeon 7000 64M Dual Display	$69
ATI Radeon 7500 AGP 64MB	$139
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ATI Radeon 8500DV All in Wonder-Remote	$385
ATI Radeon 8500LE 64M	$228
ATI TV Wonder VE PCI NTSC	$60

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Altec Lansing ACS21W 2PCs	$34
Altec Lansing ATP3W 3PCs	$88
Altec Lansing AVS300/AVS500	$48/68

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Logitech Cordless Freedom	$79
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Logitech Cordless Freedom Optical	$134
Microsoft Wireless Combo	$84
Microsoft Internet PS/2 Keyboard	$25
Logitech Internet PS/2 Keyboard	$20
FUJITSU PS/2 Keyboard	$10
Logitech optical PS/2/USB	$20

PCW-XP1800 $585

- AMD XP1800 Retail box
- ECS K7S5A Mainboard
- 256M PC2100 DDR RAM
- Geforce2 MX400 64M Video
- Maxtor 40G 7200 Hard drive
- 1.44 Panasonic floppy drive
- Sony 52X CDROM
- 18"ATX 300W Case
- Integrated sound card
- PS/2 Enhanced keyboard
- PS/2 wheel mouse
- Integrated 10/100 Network card
- 240W 3D speakers
- Front USB ports

Best Price Ever

PCW-P1700 $668

- P4 1.7 CPU Retail box
- MSI 6547 Mainboard
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- Maxtor 40G 7200 Hard drive
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- 1.44 Panasonic floppy drive
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- Integrated 10/100 Network card
- Integrated sound card
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- PS/2 wheel mouse
- 240W 3D speakers
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- 18" ATX 350W Case
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- Logitech optical mouse
- D-Link 530+10/100 network
- 1000W 3pcs 2.1 Subwoofer
- USB 2.0 ready

PCW-P2200 $1259

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- 512M DDR RAM
- MSI G4 MX460 64M video in/out
- Maxtor 80G 7200 Hard drive
- Lite-On 40X12X48X CDRW
- 1.44 Panasonic floppy drive
- Powmax 18" ATX 350W Case
- Integrated 5.1 audio
- Logitech Internet keyboard
- Logitech optical mouse
- D-Link 530+10/100 network
- 1000W 3pcs 2.1 subwoofer
- USB 2.0 ready

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The ComputerPAPER

Platform News

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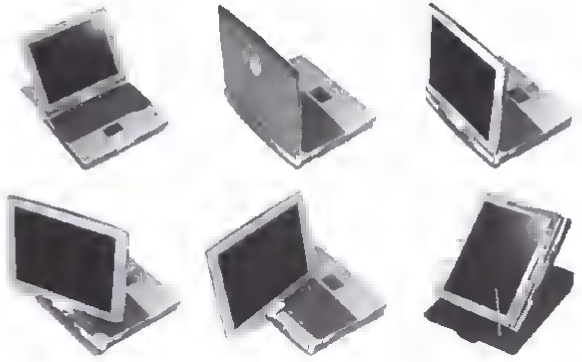
Taking a tablet PC for a spin

Acer first out with Microsoft Tablet PC-based device

By Geof Wheelwright

So you think you know what the Tablet PC is all about? No doubt you've heard about Microsoft's new product platform, which on first glance looks like a device designed solely for entering handwriting that your computer can recognize and turn into text.

TravelMate 100
From Acer Corp. www.acer.com
Estimated price $3,500



While it does do that, it also does a lot more. The Tablet PC is actually a whole new way of working with your computer. I know that sounds corny and very overblown, but it's really the only way to describe this ground-breaking new design.

To start with, the designers of the Tablet PC software platform worked with a variety of hardware manufacturers to come up with designs that would reflect the diversity of what the Tablet PC version of the Windows XP operating system could help them create.

Taiwanese computer manufacturer Acer, for example, decided that a "pure" Tablet PC was probably too radical an approach for the average user. So it designed a hybrid sub-notebook (which it says will probably sell for only a few hundred dollars more than an ordinary notebook) that could either act as a standard sub-notebook, or a Tablet PC.

The TravelMate 100 allows you to swivel the screen 180 degrees (facing outward relative to the keyboard) so you can clip it to the front of the keyboard and use it as a tablet device. Swivel the screen around again and you have a standard sub-notebook computer.

This a design a that Microsoft chairman and chief software architect Bill Gates has been championing for several years. He has shown various implementations of the Tablet PC design at major events, such as his annual Comdex

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Office update includes smoother text

Microsoft (www.microsoft.com/mac) has updated the OS X version of Office:mac with the first service pack. The update claims to contain more than 1,000 bug fixes for the suite of four programs, as well as improved performance and stability. The one feature we've been waiting for—Palm sync with Entourage v.X—has still not been implemented in this update, but Microsoft has announced plans to ship Palm conduits for Entourage on July 15, just as this issue of *TCP* hits the streets.

The update offers a huge number of improvements, both suite-wide and for individual programs. The suite-wide improvements include Quartz text smoothing in all Office:mac apps (for users of OS 10.1.5 or higher), FileMaker Server integration, ODBC support, and Button face customization, which allows the user to control the look of the toolbar buttons in Word, Excel, and PowerPoint.

The Quartz text smoothing feature allows for much better text rendering using the more sophisticated Quartz graphics layer that was previously reserved for Cocoa applications. Office:mac v.X is a carbon application, which means it used the older method of

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Are you fresh?

Talking to fish and other RF ID adventures

By Geof Wheelwright

SOPHIA ANTIPOLIS, France—Technology consulting company Accenture (www.accenture.com) has developed some innovative uses for a technology based on Radio Frequency Identification (RF ID) that allows credit card-sized cards to store and transmit information about any item to which they are attached. At a press briefing from its research facility here earlier this year, the company talked about applications that range from a fish in a supermarket that can "smell itself" to in-store checkout systems that can offer huge improvements in efficiency.

RF ID cards are battery operated and can contain memory and even sensors. In the case of the "smart fish," the sensor will record and store information about the temperature and chemical composition of the fish at regular intervals. This information can then be transmitted by the RF ID card to an RF ID card reader, allowing buyers to easily determine whether or not the fish has ever risen above a certain temperature (or spawned a culture of unhealthy chemicals) after it was caught.

The same technology can also be used to improve efficiency at supermarket checkouts, as the readers can simultaneously read many RF ID tags—meaning that an entire bag of goods can be scanned, itemized, and totaled by passing it in front of the scanner rather than scanning each item separately.

RF ID tags also have potential industrial applications. Researchers at the Sophia Antipolis facility talked about how these tags might be used on train tracks to measure the amount of heat generated by the friction between the

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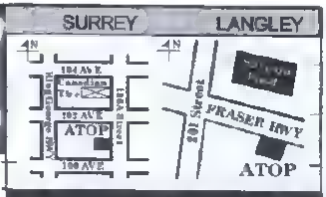

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Making inroads with Access queries

Continued from page 72

the calculated figures aren't formatted. Switch back to Design View and click the column heading to select it. Right-click and choose Properties, then select the Currency format in the Format area. Now, when you run the query again, there will be dollar symbols in front of the numbers.

Summary calculations

You can also get more general information from your database. For example, if the salaries must be taken into account in department budgets, you'll want to total the salaries for employees in each department.

To create this query, create a new Query in Design View using the Employee table. Add Department as the first field in the grid, then add Salary as the second field. Choose View then Totals to display the Totals row in the grid and leave the Department setting as Group By. In the Salary column, select Sum from the dropdown list in the Totals row.

Run the query and you'll get a list of the three departments and the total salaries of all employees in these departments.

You can now add the two items you added to the previous query to see what the salary figures will be when the pay rise is given.

Pay Increase: [Salary] * 0.1

And,

New Salary: [Salary] * 1.1

Set each of these to read Sum in the Totals row. Run your query again and you'll see the total current salaries, the total proposed increase and the total new salaries for each department. As you did for the previous query, you can format the results if you wish.

There are other calculations you can make, too, calculating the average salary of all employees, for example. Start with a new Query in Design View using the Employee table.

This time, add the Salary field to each of the first three columns and choose View, then Totals. In the first column's Total row, choose Sum, in the second choose Avg, and in the last choose Max. Now, click in front of the Salary field name in each column in turn and alter the field to read:

Total Salaries: Salary
Average Salary: Salary
Maximum Salary: Salary

Run your query to see the total, average and maximum of the salaries being paid to all the employees.

As before, you can use calculations in this type of query too, so you can calculate the total, average, and maximum of the new salaries (after the pay increase). To do this, change the Fields for all three columns to read:

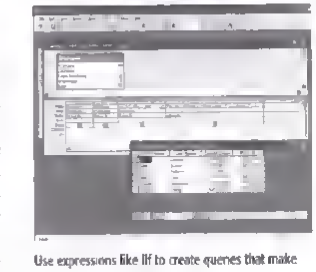
Total Salaries: [Salary] * 1.1
Average Salary: [Salary] * 1.1
Maximum Salary: [Salary] * 1.1

You can format the results to show currency symbols if you wish.

Duplicating a query

To save creating a new query each time, duplicate an existing query that is close to what you want. To do this, click the Queries option in the Objects list and right click the Query you want to copy. Choose Copy, click in a blank area just below the list of existing queries, right-click, then choose Paste. A small dialogue will appear into which you can type the name of the new (duplicate) query. Now open this query and make the desired alterations.

Other useful calculation queries



Use expressions like IIf to create queries that make calculations based on field content.

Not all fields are numeric, but there's no reason they can't be used as the basis for calculations. For example, Yes/No fields can also display and calculate information.

For example, consider the situation in which each employee is to receive a $200

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Making inroads with Access queries

Continued from page 76

bonus if they are a shareholder. To make this calculation, select Create a Query in Design View and use the Employee table.

Add the FirstName, LastName, and Shareholder fields (for reference purposes only) to the query grid. In the next empty column type this in the field area:

```
Bonus: IIf([Shareholder],200,0)
```

Run the query and see that only shareholders will have $200 appearing in this field. The expression you've used is "IIf"—the equivalent of Excel's "If" function. Here, IIf tests the value of Shareholder: if it is True/Yes the first value in the remainder of the expression is used ($200), if it is False/No, then the second value is used ($0). So the syntax of the expression is:

```
IIF(test, value if true, value if false)
```

You can use a similar process to the one we've been using to calculate the total of the bonus by department or for the entire business. For the department totals, remove the first three fields from this last query leaving only the calculation itself. Replace these fields with the Department field. (To remove fields from the Query grid, in Design View, click the column to remove and click the Cut button.) Ensure that the Department field appears to the left of the calculated field (do this by selecting it and dragging it into position). Now display the Totals line and set the Department to Group By and the calculated field to Sum. Run the query to see the resulting summary by department.

You can also use fields like Yes/No to make tests, then make calculations on another field based on the result of the test. Here's an example that gives a 10 percent salary increase to non-shareholders and a 15 percent increase to shareholders. Type this into a new field in a query:

```
Pay rise: IIf([Shareholder],[Salary] * 1.15, [Salary] * 1.1)
```

Other options include using IIf to test a field that doesn't store Yes/No information but, instead, contains text or numbers. For example, create a query with the FirstName and LastName fields and this one:

```
Pay rise: IIf([Salary] >35000,[Salary] * 1.15, [Salary] * 1.1)
```

This shows the result of giving a 15 percent increase to people who earn more than $35,000 and a 10 percent increase to those who earn $35,000 or less.

To enter an expression into a field in your Query more easily, open the Expression builder dialogue so you can see your expression in a larger area. This is particularly helpful when you're writing a long query. To do this, click in the field, then on the Build button on the toolbar.

This opens the Expression Builder dialogue and displays your current expression. The Expression Builder has a built-in Help function for finding useful information when you're building expressions.

Using a Crosstab

A Crosstab query allows you to analyze data in a table. Use it if, for example, you want to assess whether being a shareholder gives you a higher salary than non-shareholders, and whether that changes by department.

For this, the Crosstab you'll create will display the departments down the left and the shareholder status (Yes/No) across the top. The average salary for groups of employees will appear at the intersection of each column and row.

For example, at the intersection of the Yes column and the Accounts row you'll see the average salary for all employees who are both shareholders and work in Accounts. In the column to the right will be the average salary for those employees who are not shareholders and who work in Accounts.

Compare these figures to answer the question "Are shareholders in the Accounts department paid more on average than non-shareholders?"

Here's how to create the Crosstab query to make this analysis. Begin by clicking the Query button in the Objects list, then choose Create Query By Using Wizard. Click the New button and, from the New Query dialogue, choose the Crosstab Query Wizard option. Click OK, in the Crosstab Query Wizard dialogue, choose Employees as the source table, and click Next. When prompted for the field you want to use for the row headings, choose Department (this will ensure the Department names appear down the left of the results table).

Click Next to continue and, when prompted for the field to use for the column headings, choose the Shareholder field and click Next. Finally, choose Salary as the field for the calculations and choose Avg from the Functions list. Disable the Yes, include row sums checkbox, and click Next.

Choose View The Query, click Finish, and the Crosstab query results will appear on the screen. The column headed "-1" is the Shareholder column and that headed up with "0" contains the non-shareholder information. You can improve the look of these headings by clicking Return To Design view, right-clicking an empty cell (in an empty column) of the grid and choosing Properties. In the Column headings area type:

```
Yes,No
```

Run the query again and the headings will be a more self explanatory. ❑

Helen Bradley specializes in writing hands-on tutorials. Her columns appear regularly in a number of publications in Australia, the U.K. and the U.S. Contact Helen at helen@helenbradley.com.

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Office update includes smoother text

Continued from page 74

text smoothing found in OS 9. The OS 10.1.5 upgrade is the first version to allow Quartz text smoothing in all apps. An updated version of Internet Explorer (5.2) is now available that takes advantage of this feature. The Internet Explorer update is not included in this service release, however.

Other improvements to all apps include improved stability for Word, Excel, and PowerPoint, including bug fixes to the project gallery feature and Visual Basic.

Improvements to the specific programs are as follows:

- **Word** is more stable when working with large documents or creating large tables. Performance has improved in the areas of scrolling long documents, printing, and working with complex border art. The custom dictionary no longer gives a "dictionary full" message if you try to add new words.
- **Excel** has fixed a very major bug we mentioned in our product review in the June issue of *TCP*, namely Excel 98 incompatibility. Excel X can now save a file that will work when opened in Excel 98. As well, Excel 98 files can now be opened in Excel X without corrupting them. Performance when working with charts has been improved by as much as four times.
- **PowerPoint** has improved performance when caching large or complex pictures during screen updates. With the Quartz smoothing on in OS 10.1.5, transparency effects are much faster in slideshows, the time to prepare the next slide is also shorter, and transparent objects will animate properly during a presentation. Faxing from PowerPoint now works as it should.
- **Entourage** has had improvements to its database engine. The maximum mail database has been increased from 2 GB to 4 GB and Entourage can now rebuild some damaged files that it previously could do nothing with. It now uses the hard drive and network less, which improves performance and battery life on laptops. IMAP has been improved so users can now synchronise IMAP folders as they switch between online and offline modes. The Entourage Database Daemon is more stable running in the background, and Entourage is more stable when working offline.

There are many more improvements to be found in the suite and the update makes a noticeable difference when installed on a G3 or G4 system. We noticed the improved performance right away, and the stability fixes are most welcome.

Since the service release is free to users of the regular or education version of the suite, it is a must-have upgrade. Note, however, that with the Service Release 1, Microsoft has cracked down on pirated copies, so many pirated serial numbers are invalidated by the update. So if you are running an illegal version of Office:mac v.X, there is a good chance that after the update you will not be able to run any of the programs. However, now that the suite is faster and more stable, it might be a good time to go pick up an upgrade. If you're a Palm user, you'll have another OS X alternative to Palm Desktop (after July 15, that is).

EMac now available to everyone

After releasing the eMac in May and restricting sales to the education market, Apple was flooded with calls and email from people wondering when they would be able to buy one for use at home. Well, it only took a few weeks for Apple to see the possibility of a consumer eMac, which it announced in June.

The major difference between the educational eMac and the consumer version is price: US$999 for a basic educational eMac and US$1,099 for non-education purchases. Another difference is that the eMac comes in two configurations for education. CD-RW or a CD RW/DVD combo drive. The non-education model is only available with a CD-RW drive at this time.

The eMac model available in Canada includes a 700 MHz G4 processor, 128 MB RAM, 40 GB hard drive, and a 17 inch CRT display, all for $1,699. The eMac features all the usual Mac ports, including two FireWire and two USB ports, a 56Kbps modem, 10/100 Ethernet, and an AirPort slot. The combo drive version is not available in Canada at this time, which is a shame because a lot of home users in the eMac target audience would probably appreciate the ability to watch DVDs on their computer. In terms of performance, the eMac is comparable to the 700 MHz LCD iMac: same CPU, bus speed, and 32 MB nVidia GeForce2mx graphics card as the $2,249 iMac, but for $550 less. So if you want a new G4 Mac for your home and don't care about the LCD screen, the eMac is worth a look.

Mac OS 10.1.5 update available

Possibly the last update to OS 10.1 before 10.2 debuts, this release consists mostly of updated digital camera and CD burner drivers with a couple of notable exceptions.

The first noticeable improvement is the ability of non-Cocoa apps to use the Quartz graphics layer for text smoothing. Previously, many popular Carbon apps like Internet Explorer, AppleWorks, Office:mac X, and Netscape were forced to use the inferior Carbon graphics libraries, but the OS 10.1.5 update opens up the Quartz layer to any program that wants to use it. However, programs will not automatically adopt the new Quartz smoothing, they must be updated. Internet Explorer and Office X have been updated already, other apps should be updated in the near future.

There is a freeware hack called Silk available that enables Quartz smoothing in all applications. It's available on www.versiontracker.com or directly from www.unsanity.com.

The other improvement in OS 10.1.5 is significantly faster iDisk access, especially for DSL or cable Internet users. If you are using a modem to access your iDisk, you won't notice a change. However, if you have high speed Internet access, the iDisk will both mount faster and allow you to access files more quickly than in previous versions of OS X.

There is one final piece of good news for owners of older G3 Macs with ATI Rage Pro graphics cards. OS 10.1.5 introduces support for 2D and QuickTime hardware acceleration. This means performance of the Aqua GUI should be improved, scrolling should be faster, and large QuickTime movies can be played with fewer dropped frames on these machines.

Macs that use the Rage Pro chipset include tray-loading iMacs and the original 333 MHz and 400 MHz PowerBook G3s. The slot-loading iMac and FireWire PowerBook G3s already had hardware acceleration as they use the newer Rage 128 chipset.

The 10.1.5 update is available in the System Preferences panel in OS X or from Apple's Web site. Since Apple has not announced pricing for 10.2 yet, this may be the last free upgrade for OS X, so if you're using 10.1, you should grab it for sure.

CPU upgrade for Cube, G4 towers

No one thought it could be done, but Powerlogix (www.powerlogix.com) has designed a CPU upgrade that fits in both standard and miniature G4 Cubes. This marks the first time any company has released an upgrade for the Cube, and the first time an upgrade over 550 MHz has been available for the G4 towers.

The new Powerlogix upgrades are available in 800 MHz and 1 GHz configurations, and are compatible with a wide range of machines. There will be two versions of the new boards, one for Macs with a 100 MHz system bus and another for Macs with a 133 MHz bus speed. The G4 Cube and original "Sawtooth" G4 towers are 100 MHz machines; the new "Quicksilver" G4 towers are 133 MHz machines.

The complete list of supported models are (original speed in brackets) Sawtooth AGP G4 (350 to 500 MHz), G4 Cube (450 to 500 MHz), Digital Audio G4 (533 to 733MHz), and Quicksilver G4 (800 MHz to 1 GHz). The 800 MHz board lists for US$599 and the 1 GHz model is US$799. All upgrades include 256Kbps of on-chip Level-2 cache and 1 MB of backside Level 3 cache. That's not as good as the 2 MB Level 3 cache in the Quicksilver G4s, but it's better than the complete lack of Level-3 cache in the G4 iMac and 800 MHz G4 Tower. For more information, visit the Powerlogix Web site, or Other World Computing (eshop.macsales.com), one of the first authorized distributors of the new cards.

Upgrades for 'Pismo' PowerBook G3

Powerlogix and the newly resurrected Newer Technologies (www.newertech.com) have both announced upgrades for the

very popular but previously non-upgradeable "Pismo" series of PowerBook G3 Macs. These models, also known as FireWire PowerBook G3, were the last G3s released before the Titanium PowerBook was introduced in January 2001. They were sold in two configurations only: 400 MHz and 500 MHz. Both models included 14.1-inch screens and DVD playback with 8 MB Rage 128 video cards, which means they are fully supported in OS X for DVD playback and video acceleration, making them very popular in the used market.

However, since Apple chose to include proprietary ROM chips on the processor card, the Pismo line has never been upgradeable until now. Both the Powerlogix and the Newer Tech cards are G4 CPU upgrades running at 500 MHz with 1 MB Level-2 cache. They use the low power G4 7410 chip, the same chip used in early PowerBook G4 Titanium machines.

The difference between a 500 MHz G3 and a 500 MHz G4 will not be noticeable for OS 9 users, but for those running OS X, the G4 chip will significantly speed up the OS and the GUI in particular, making it a worthwhile upgrade for those who use OS X on their PowerBooks and want to squeeze a few more years out of them before moving to a newer machine.

Both upgrades require that you send your PowerBook in to perform the upgrade—turnaround time should be less than a week (five business days). The procedure involves removing the G3 chip from the existing processor card, then soldering on a G4 chip. The PowerBooks are tested fully before being sent back.

The Newer Tech upgrade is available exclusively from Other World Computing (www.macsales.com) at this time. It retails for US$299, including shipping.

The Powerlogix upgrade is available from various distributors and it retails for US$329, although it is priced at US$299, including shipping, until the end of July as an introductory promotion. ❑

Justin Siemens is a Mac IT specialist based in Vancouver B.C. You can contact him at jsiemens@mac.com.

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QuickTips

Vector objects in PaintShop Pro

Understanding vectors • Photos are bitmap files made up of a series of coloured pixels, but vector images are made up of shapes. The resulting files are much smaller and can be scaled up or down without showing jagged edges. Typically, many clip art images are created as vector images and are commonly in WMF format.

Creating vector objects • Create vector objects in PaintShop Pro 7.0 by selecting the Create as Vector option when using tools such as the Text, Draw, or Preset shapes tool. If you don't have a vector layer selected when you do this, a new vector layer will be created and the object automatically placed on it.

Selecting vector objects • When a vector layer is selected, you'll find the Object Selector tool (at the foot of the Tool Palette) is enabled. Click this then click on any Vector object to select it. The selected object will appear with a border around it and sizing handles. The central bar and handle can be used to rotate the object. Placing the mouse pointer on the move handle lets you to move the object.

Right-click options • When the Object Selection tool is enabled, you'll find most of the vector features in PSP are available by right clicking on an object. From this shortcut menu, choose Properties to alter the object's line and fill colours and style. Choose Node Edit to display the shape's nodes. You can edit these to reshape the object.

Editable type • Using vectors, you can add editable type to an image. Click the Text tool, click where the text should appear, then select the Vector option. Type the text in the dialogue and click OK. Move the text into position and size it appropriately. At anytime in the future you can edit the text by selecting it with the Object Selector, then choosing Edit Text from the Object Selector's Tool options dialogue to open the Text Entry dialogue.

Creating text on a curve • To create text along a Freehand shape, draw the shape using the Freehand line tool as a vector shape. Select the Text tool and hold the mouse over the edge of the shape until it turns into a letter A over a semicircle. Click to select the curve, type your text, enable the Floating option, and click OK. The text will appear along the line you drew. Right-click the Floating Selection in the layers palette and choose Promote To Layer. If you wish, remove the line you used to align the text.

Changing the way text looks • You can use vector text to alter the shape of text objects, for example, to create an oversized first letter or to pull text into different shapes or alignments. Choose the Text tool, click in the editing area, and type your text. Choose the Vector option and click OK. Select the text using the Object Selector, right-click it, and choose Convert Text To Curves. As Character Shapes. You can now use the Object Selector to select each letter in turn and move it to a new position. Use the Node Edit option on the right-click menu to alter its shape and the Properties option to change is line and/or fill.

Revamping clip art images • Using PaintShop Pro 7.0, you can open clip art WMF files or access clip art images by copying them from your clip art tool and pasting them into PaintShop Pro. Display the Layer Palette to see the objects in the image. Using the Select Object tool, click on an image to select it, then you can recolor the pieces to change the look of the image. You can also remove pieces you don't want by deleting some of the objects that make up the image. You can add new objects as well. When you're done, simply save the image in WMF format and it will retain all the benefits of being a vector image.

Converting vector layers to raster layers • It is possible to convert a vector layer into a raster layer—this will happen automatically if you save an image that has vector objects in a raster format, such as BMP, GIF, or JPEG. To change a vector layer into a raster layer, select the layer you want to alter in the Layers Palette, right-click and choose Convert To Raster Layer. You should note, however, that you can't do this in reverse—a raster layer can't be converted to a vector layer.

—Helen Bradley

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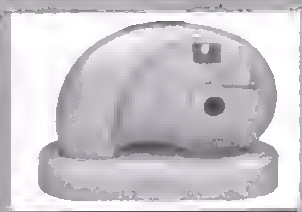
Z1304D1

Online and on the move: dual-mode digicams fit the bill

As gadgets go digital cameras are certainly one of the most fun. One of the newest trends in digital photography is the two-in-one camera. These can be used as a standalone one megapixel digital camera or can be hooked directly to the PC and used as a streaming video camera for use with video chat or network meeting applications.

There are a few of these devices out there, from a number of different companies. Here are two that we've had a chance to look at recently.

Creative's PC-Cam 600 is the updated version of the PC-Cam 300. This one doubles the onboard memory from 8 MB to 16 MB, adds motion capture, and bumps up the image size to 1.3 megapixels using an SXGA-sized CCD (1024x768). The camera features a few shooting modes, including still, timer, movie (352x288), five-shot burst, and a straight voice-record mode for taking audio memos. It has a built-in flash with a setting for red-eye reduction. It's powered by four AAA batteries, and comes with a hand strap. As with other

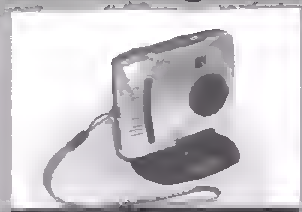


Creative PC-Cam 600

From: Creative Technology, www.creative.com
Estimated price: $200

cameras of this type, there's no window on the back for reviewing your images, so you'll have to wait until you get back home to see what you've shot.

When connected to the PC, it uses a USB 1.1 connection for streaming video or transferring pictures back to the computer. Movie capture resolution is slightly higher when connected to the PC, at 640x480. It comes with a base that tilts forward/backward, but only very slightly—this is probably the camera's weak point in that when it's connected directly to the PC, it doesn't have a lot of flexibility in terms of positioning.



Hercules DualPix

From: Guillemot Corp., www.hercules.com
Estimated price: $150

Other than that, it's a nice little device with a lot of functionality, and certainly worthy of Creative's good name. It comes with a 90-day hardware warranty.

The DualPix from Hercules has a number of attractive features. The camera uses a 640x480 CCD sensor but uses interpolation to bump up still images to 1024x768 resolution. The front of the DualPix has a manual focus control, allowing you to choose between far-off and close-up (as close as 10 cm) with a spin of your fingers. Though it doesn't have a built-in flash, it does have several shooting modes including timer, movie (320x240), and a five-shot burst mode. The camera comes with a hand strap and a protective carrying case. It's powered by four AAA batteries, and features 8 MB of onboard memory.

Back at the PC, the camera slides into a stand that can be tilted backward/forward, and spun through 360 degrees. (There's also an adhesive strip you can use to fasten the stand to your desktop, or to the top of a monitor, if you want to keep it in one place.) The camera hooks to your PC using a USB 1.1 connection, which is used for both streaming video and digital still picture transfer.

Though it's not the most cutting edge of the dual-mode cameras, the DualPix is a nice little bundle, at a slightly more attractive price point.

It comes with an even more attractive three-year warranty.

—Sean Carruthers

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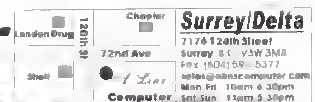

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Here comes the sun

A solar charger for your stuff

By Emru Townsend

A few months ago I went on a business trip, which was fantastic by all accounts, except for two things. I had to wake up at 5 a.m. to catch my flight out (I'm really not a morning person), and I had to deal with the added weight and awkwardness of toting rechargers to the batteries in my laptop, MiniDisc recorder, MP3 player, cell phone, and Handspring Visor.

Brunton SolarPort 2.2
From Brunton, www.brunton.com
Suggested retail price: $145

In my long held tradition of not learning things until it's too late I found out about the Brunton SolarPort 2.2 during my return trip—I kid you not—when I picked up the in-flight magazine to occupy myself when the laptop's battery gave out.

If you're an outdoorsy person, you've probably heard of Brunton. It makes gadgets for, well, outdoorsy people. These days that means GPS receivers and tiny FM radios, as well as standbys like compasses, portable stoves, and binoculars. And of course the SolarPort.

The SolarPort's stated raison d'etre is to supply power to electronic gadgets when you're miles away from the nearest electrical outlet. All you have to do is connect it to your device with one of the eight supplied adapter plugs, open the clamshell and aim the solar panels toward the sun.

Even if you're not planning on setting up a tent in the woods anytime soon, you can see the benefits. If you spend a lot of time on the road the SolarPort can reduce your dependence on finding an outlet (or deciding what to plug into your car's cigarette lighter first) to recharge or use one of the many portable gadgets that are becoming increasingly essential. And skin cancer notwithstanding, how can you get more environmentally friendly than the sun?

I like the design of the SolarPort, which is light but reasonably sturdy. The size is right, too. When closed it's about the dimensions of a VHS cassette and only a little heavier. Just about everything you need to adjust it to your particular device is along the hinge: a switch to select between 6 volts and 12 volts, and male and female mini connectors.

Unfortunately, you'll have to carry the various adapter plugs (one of which is a car cigarette lighter-style adapter) and suction cups (for window mounting) in a separate container; I wouldn't have minded sacrificing a little extra volume on the SolarPort to make it self contained.

Speaking of adapter plugs, I was surprised to find that none of them fit in my Toshiba Satellite Pro. My collection of similar adapter plugs from Radio Shack had a few sizes that the SolarPort didn't but my poor laptop remained out of luck. However, the included plugs supported every other device I own that uses an AC adapter or a car's cigarette lighter, and it's entirely possible that another trip to Radio Shack will solve the problem.

The SolarPort provides 2.2 Watts of electricity, which seems to slow recharging somewhat (my MiniDisc player, for instance, uses a 7 Watt recharger). If that's an issue, you can easily connect multiple SolarPorts through the hinge connectors. That's not much of a benefit if, like me, you're trying to cut down on carry-on luggage; but if you're planning to recharge your laptop as you drive from, say, Montreal to Toronto, it might be worth the expense ❑

Emru Townsend (emru@pobox.com) prefers to recharge himself with Iolt Cola and chocolate M&Ms.

A BlackBerry for the gabbing crowd

There are some who'd say the BlackBerry was perfect as it was: mobile email, a pocket organizer with contact list, a calendar, memo pad, and more. What more could you want? Well, apparently voice capability was in demand, because Research In Motion has released a new version of the device that features a headset jack, allowing you to make and receive phone calls from your BlackBerry.

The advantage of this is obvious: you can leave your cell phone at home. The BlackBerry 5810 has a belt clip and holster similar to the one found on the old BlackBerry Enterprise Edition, but with an open end, allowing you to use the buttons on the side. (The new holster also spins in place so you can angle it properly, which is a really nice new feature.)

BlackBerry 5810
From RIM and Rogers AT&T, www.blackberry.net
Estimated price: $749

The BlackBerry 5810 connects to the outside world using a GSM/GPRS network, which means your carrier choices will be limited, but the range should be slightly better than the data-only BlackBerry, which used the Mobitex network. As with other GPRS devices, this one requires a SIM card to store your identity. This one inserts inside a little plastic tray at the bottom of the device, near the interface (rendering it incompatible with the older sync cradles, due to a slightly different interface—this one uses its own USB cradle).

Of course there are a couple of downsides. The first is that the keyboard isn't really set up properly to handle phone calls: the number pad is spread out across the top row, sequentially, as with a standard QWERTY keyboard, which means you'll have to relearn how to dial. (There's also the problem of the missing asterisk, but that's another issue altogether.)

Far more important, if you're already a BlackBerry user is that your battery life will plummet once you switch to this model, because servicing a full cellular phone connection takes a lot more juice than basic radio pager communications.

If you're willing to place your BlackBerry in the charger every night, though, it shouldn't be an issue. The cell phone component is certainly competent, and the all-in-one design means you'll have one less device to cart around.

—Sean Carruthers

Bluefish lightens your load

By Sean Carruthers

NEW YORK—Ever wondered how a little blue fish could lighten your load?

Well, that question was answered the second TechXNY attendees walked in the door of the Jacob Javits Convention Centre. Facing them was a small blue fish sitting atop a blinking blue light. The fish was painted onto a 17x17 cm metal box owned by Bluefish Wireless Inc. (www.bluefishwireless.com/), which featured an infrared sensor/transmitter designed to communicate with any Palm-based handheld running Palm OS 3.1 or above. Users pointed their handheld at the sensor, approved the file transfer and installation, and an electronic copy of the TechXNY program guide was transferred to their PDA. Sure beats lugging around a kilogram or more of paper, doesn't it?

Anyone who has spent time at a trade show collecting literature knows how heavy all those pieces of paper can get, and the Bluefish technology is one way around this problem. The metal box (known as a Bluefish Access Point) can be mounted in a booth, or in a public area, and runs off batteries, so it doesn't need to be placed within reach of a power supply.

The implementation at Javits Center was a perfect example of what the technology can offer: before we even entered the show floor, there were a number of signboards set up with instructions, in large type, on how to download the TechXNY program, complete with a full exhibitor's list, a schedule of keynotes and special events, and the option to download additional information.

From there it was easy to look up an exhibitor's location with a couple of taps on the screen of the Palm. At Bluefish's booth, users could download more information, including a guide on how its technology works.

The potential of this technology is great for offering location-based services, allowing users to hold up their handheld to a localized Bluefish Access Point instead of going booth to booth collecting paper press kits.

The information stored on the box can be updated via a wired Ethernet connection or a wireless link receiving updates from a Bluefish server.

The wireless configurations currently available include a long-range 900 MHz connection and a shorter-range 802.11b WiFi connection.

In areas where setting up a Bluefish server is impossible or impractical, the boxes can be set up to receive updates via a paging network. In this regard, the Bluefish Access Points are technology agnostic. A Bluefish server can control more than 100 remote Bluefish Access Points.

The Bluefish Access Points can also be set up to do other tasks that can, theoretically, be set up over an infrared connection, such as synchronization or email retrieval/sending.

In a company where employees are always on the go, this type technology would mean employees could send an email from their Palm without having to sync it with their desktop PC.

As data transfers are expected to take 20 seconds or less once a connection is established, you would be able to get back to your work (or your coffee break) fairly quickly. ❑

Seagate announces first Serial ATA drive

Plus higher-density platters for increased hard drive capacity

Just over a year ago, Seagate (www.seagate.com) announced a breakthrough in data density for its hard disk drives, allowing up to 20 GB per side for each platter inside the drive. Now the company has bumped that capacity up to 30 GB per side, or 60 GB per platter, meaning a standard two-platter Seagate drive will now have a capacity of 120 GB.

Seagate's new Barracuda ATA V drive will feature platters with this higher density, spinning at 7,200 rpm. The first generation of the new drives will connect to the PC with the ATA/100 interface. As with the last generation of the Barracuda, this drive will feature Seagate's noise-damping technology, placing the drive's acoustic level below the threshold of the human ear.

As technology in the rest of the PC world gets better, that interface will become the biggest bottleneck inside your desktop computer—the interface has remained standard for much of the past two years despite increases in the speed of both processors and memory. While Maxtor has introduced that ATA/133 interface, Seagate has been holding out for Serial ATA and has now announced plans for the first such drive, which will hit the market some time this fall.

The Ultra ATA interface is a parallel interface to the PC, typically offering a transfer speed of 100 MBps to and from the PC (Maxtor's ATA/133 line runs at 133 MBps). As you'd guess from the moniker, Serial ATA is a serial interface to the PC, which will use new snap-in, hot-pluggable connectors to the motherboard. The first generation of the Serial ATA spec runs at 150 MBps, already faster than any of the Ultra ATA drives currently on the market and the interface has a theoretical speed of up to 600 MBps down the road.

The Barracuda V line will be Seagate's first to feature Serial ATA technology, and will ship later in 2002 as motherboards and host cards supporting Serial ATA are ready to hit the market.

—*Sean Carruthers*

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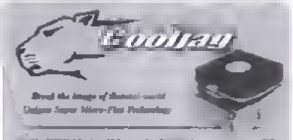

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Sony MD offers alternative to MP3

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Simple Burner 1.0 (Both use the GraceNote CDDB music database for album information.) As its name implies, Net MD Simple Burner is the easiest to use: it digitally extracts tracks from a CD and directly copies them to the MiniDisc recorder, though only in LP2 or LP4.

OpenMG Jukebox is a full-fledged music organization and playback program that recognizes audio in MP3, Windows Media, WAV, CD-Audio, and OpenMG formats. (I'm sure you're not in the least surprised that OpenMG is a Sony development.) OpenMG Jukebox uses a "check-in/check-out" system that allows you to copy (check out) the same track onto three separate MDs. Before you can copy a track a fourth time, you have to remove it by using the software to check it back in. (You could delete the track using the recorder's own edit functions, but then the software wouldn't register it as being checked in.)

It's during check out that music is actually recorded, and this is where Sony gets its speed ratings for transfer. SP is supposed to be rated at 4X (four times faster than real-time), LP2 at 16X, and LP4 at 32X. However, the first time you transfer a song, it has to be converted to ATRAC, which adds a considerable amount of overhead. Subsequent transfers use the cached data, and transfer speeds then approach the actual rating. As I mentioned earlier, my first LP2 copy of the 63-minute *Mezzanine* took almost 11 minutes; the second time around it took almost six—not quite 16X, but still a respectable 11X or so.

Although people used to MP3 players might balk at the less than speedy transfer times, it seems a small price to pay for the flexibility afforded to MiniDisc recorders—not the least of which is the ability to easily record from analogue devices or, in many cases, a microphone (the MZ-S1 being an exception, not having a mic input). And it's hard to argue with the price and availability of blank media (you can find MDs in many music and electronic stores).

MP3 isn't going anywhere, but by getting a little closer to it Sony has probably made the MiniDisc format a few new friends. ❑

Emru Townsend's MiniDisc recorder looks like something out of a Japanese animation video. Despite his best efforts, it does not turn into a giant robot.

Keep your data safe when shopping online

Most everyone has at least heard of a horror story stemming from online ordering and the unfortunate may also have experienced the horror first hand. While some consumers still hesitate to buy online, experts insist shopping online need not be risky and offer tips to minimize the risk associated with shopping online.

Legitimate vendors have nothing to hide

Common sense is still the best way avoid trouble. Safeshopping.org (www.safeshopping.org) suggests consumers pay close attention to a site's privacy policies and legal terms, and only do business with organizations that seem reputable. A listed business address is important when ordering online. Flags should go up if the site lists a P.O. box as its address.

Keep detailed records of transactions

As with transactions taking place in physical stores, it is important that consumers keep good records of their transactions. Usually a print out of an order confirmation will suffice, though if there is a page listing the merchant's location and phone numbers as well as the site's legal terms and other relevant information, consumers are advised to print that out too just in case. If there is a problem with your order be sure to keep records of any correspondence with the company.

Where possible, buy Canadian

While the bulk of online shopping is done on sites not on Canadian soil, Canadians would be advised to deal with Canadian companies whenever possible. Dealing with online businesses outside your country's borders, your rights may be difficult to enforce and legal recourse may prove more trouble than it's worth.

Protect your sensitive information

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Taking GPRS for a test drive

By Geof Wheelwright

For anyone who has ever considered wireless email, Web browsing, or corporate network access while on the move, the letters G, P, R, and S will take on new significance.

GPRS (general packet radio service), is, roughly speaking, the data communications portion of the GSM digital cellular system, and it's now available from a couple of different providers in Canada: Microcell (Fido) and Rogers AT&T Wireless.

I tested GPRS using the Microcell service, available either as a data-only service by using a PC card from Novatel or Sierra Wireless (or any other manufacturer of GPRS cards) or as a voice and data service available on a GPRS-enabled mobile phone.

The combined service test included the use of a $500 Motorola P280 GSM/GPRS phone (which also included a headset for listening to FM radio). It allowed me to connect to the GPRS network using a cable that ran between the phone and the computer.

Fido GPRS

Fido GPRS service
From Microcell, www.fido.ca
Monthly rate $50 (flat rate special until August)

P280 GSM/GPRS phone
From Motorola www.motorola.com
Price $500

Wireless PC Merlin G100 card
From Novatel, www.novatelwireless.com
Prices $525

The nice thing about this configuration was that it didn't require separate dialing into an Internet service provider (ISP). It operates by directly connecting to its digital GPRS network and eliminates the loss of performance typically associated with dialing into an ISP over a mobile phone.

Setup was quite easy using the software provided by Motorola. Within a few minutes of unpacking the phone, I was wirelessly connected to the Internet. I should say at this point that wireless was, of course, a relative notion, as this solution did require a cable to run between the mobile phone and the laptop.

But users can also use the fast infrared connection accessory to establish the GPRS link. This means that even when connecting to the Internet using a mobile phone and a notebook computer, the link is still completely wireless.

In either case, the GPRS connection works and offers speeds around 56 Kbps (the same kind of performance normally available from a dialup modem hooked up to your desktop computer). According to Microcell, it is possible to attain data transfer speeds of up to

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Weaving your own Web site

IE CSS extensions: Part 8

By Keith Schengili-Roberts

In the past several articles, we've looked at some of the new Cascading Style Sheet (CSS) properties that Microsoft has added to recent versions of Internet Explorer. This month, we conclude the series (for now) by looking at two very different sets of properties that control aspects of the user interface and provide greater control over background positioning of images.

The accelerator property

The accelerator property is a browser-specific extension available within Internet Explorer that allows Web authors to turn off the underlines under "accelerated" items. An accelerator is the keyboard shortcut that activates a particular feature—for example, in Word, ALT + F activates the File menu. The word "File" in this case has an underlined letter "F", showing the user that this is the key that, combined with holding the ALT key, will activate the feature. The accelerator property allows the Web author to turn this feature on or off.

Accordingly, the accelerator property has two values: true and false. For reasons that should be obvious, it makes the most sense to combine this with the underline HTML element (though keep in mind that this is a deprecated element). It must also be used in conjunction with the label HTML tag in order to tell the browser that the underlined element is selectable. The following example code shows how this property could be effectively used within a sample form:

```
<!doctype html public "-//W3C//DTD XHTML 1.0
Transitional//EN"
    "http://www.w3.org/TR/xhtml1/DTD/xhtml1-
transitional.dtd">
<html>
<head>
<title>accelerator Property Example</title>
<style>
```

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10 anti-scam and anti-spam Web sites

By Keith Schengili-Roberts

Tired of all the messages offering ways to make money, save money, lose weight, get a diploma, and get ripped off, all with only a mouse-click? These sites offer a few ways to fight back, fend off, and poke fun at scammers and spammers.

- **Internet ScamBusters:** If you suspect you're the target of some Internet-based scam, make sure you check this site first. It's an award-winning site devoted to exposing Internet-based frauds and scams of all sorts. Scam Check Station lists the most popular scams of the moment, and how you can prevent yourself from getting taken.
  www.scambusters.org/
- **Nigeria—The 419 Coalition Web site:** A typical "419" email goes like this: a stranger asks for your help in accessing a bank account holding millions of dollars, promising you a significant cut for providing some funds to open up the account. What started out as a fax-based scam has grown exponentially with the advent of spam email. It's called 419 Fraud, after the a section of the criminal code of Nigeria, where most of these scams originate. This page says what you should and shouldn't do if you receive such an email.
  home.rica.net/alphae/419coal/
- **Work From Home, Unwelcome Herbalife Signs:** Spam isn't just electronic. If you live in a bit city, chances are you've seen signs telling you how you can make lots of money working from home or how you can lose dangerous amounts of weight in a week. If you've ever wondered where they come from, visit this site. It details the network distribution scam and the herbal remedy firm behind it.
  cockeyed.deadtrout.com/workfromhome/workfromhome.html

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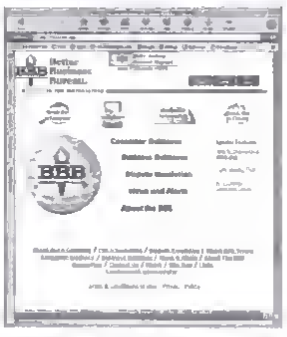
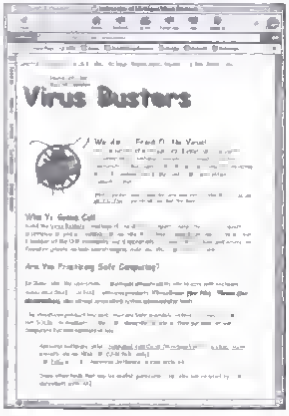
ID anti-scam and anti-spam Web sites

Continued from page 90



- **Better Business Bureau:** This Web site for this organization—which is dedicated to fairness in the marketplace—has plenty of information and news to help you protect yourself from being scammed. Find out whether a particular company or charity is legitimate, learn ways to protect yourself from identity theft, or file a complaint.
  www.bbb.org/
- **Urban Legends Reference Pages:** Ever get an email from a well-meaning friend who is passing along a message containing information on "the worst virus ever" or asking you to sign an online petition for something that sounds fishy? If so, take a look at this site, hosted by the San Fernando Valley Folklore Society which lists a number of Internet virus hoaxes and fake petitions. This site covers urban legends in general, which makes for interesting and sometimes amusing reading.
  www.snopes.com/
- **Diet Fraud:** There are many people looking for a short cut to losing weight. Unfortunately, there are also many scam artists who prey on them, by selling fraudulent diet products. This site covers "all the news not fit to eat," including diet frauds, government actions and lawsuits surrounding the weight loss industry, and cautionary news on the latest herbal supplements, "slimming patches," and more.
  www.dietfraud.com
- **Virus Busters:** Sponsored by IT staff at the University of Michigan, this site is dedicated to fighting the spread of viruses. While intended primarily for people associated with the university, the site contains general information, anti-virus software, and lists of current viruses and email virus hoaxes (often designed to make you delete necessary files on your computer).
  www.itd.umich.edu/virusbusters/



- **Fight Spam on the Internet:** Tired of getting virtual heaps of junk email in your inbox? If so, go to this site for tips on reducing the amount of spam emails you receive. It includes detailed information on how you can set up blocking programs, tracing the source of spam, and even the latest news on the legal front in the fight against spam.
  spam.abuse.net/
- **Spam FAQ:** It may not look pretty, but the Spam FAQ contains a lot of information about the origins of spam, how and why you get spam, common types of spam and hoaxes, filtering systems, and more. The site also has a thorough listing of links and other online resources.
  ddi.digital.net/~gandalf/spamfaq.html
- **The Spam Letters:** This Web site spoofs and parodies replies to spammers. It shows how surprisingly unsophisticated the majority of spammers seem to be—as the many clueless responses to the spoofing reply emails seen here would suggest.
  www.thespamletters.com/ ❑

IE CSS extensions: Part B

Continued from page 90

```
u {accelerator: true}
body {font-size: large; font-family: Arial, Helvetica,
sans-serif}
</style>
</head>
<body>
When you hit the ALT key, underlines will appear
underneath the "F" under "First Name" and the "L"
under "Last Name."
<p>
<ul>
<li>Hitting ALT+F simultaneously will move focus
automatically to the First Name input text
field.</li>
<li>Hitting ALT+L simultaneously will move focus
automatically to the Last Name input text
field.</li>
</ul>
</p>
<form action="goes-nowhere.php" method="post"
name="erewhon">
<label id="fname"><u>F</u>irst Name
</label><input type="text" accesskey="F"
name="fname" size="10" maxlength="15" />
<label id="lname"><u>L</u>ast Name
</label><input type="text" accesskey="L"
name="lname" size="15" maxlength="25" />
</form>
</body>
</html>
```

When you load this code in Internet Explorer 5.5 and greater, you will notice that when you hit the ALT + L key, the cursor appears in the "Last Name" text field.

The accelerator property appears to be a relatively harmless enhancement, as it is unlikely to interfere with functionality when the page is viewed in other browsers (while the sample code does not work on other browsers, neither does it appear to cause any problems). However, unless you tell the user about this feature, it is unlikely that a user will find it (they would have to accidentally hit the ALT key to discover it otherwise).

Background-position-x and -y properties

In order to provide Web authors with greater control over where exactly background images can begin tiling themselves as a background, Microsoft introduced two new, browser-specific background properties with the release of version 5.5 of Internet Explorer: background-position-x and background-position-y. Both properties are used in conjunction with the background-image property, and are used to set the position where the background image begins to start tiling. Note that this does not mean that you can set exactly where the background image is to start tiling within an element on a Web page; instead, they position the background image relative to itself—so a setting of 0,0 does not refer to the top-leftmost portion of the background element, but the top-leftmost position of the image itself.

Both background-position-x and background-position-y can take percentage and specific length measures. A value of 50 percent means that the background image should start tiling at exactly half of its vertical (or horizontal) dimension. When a length measure—such as pixels—is used, Internet Explorer begins tiling the background image at the point specified. The following code example shows how these values can be applied using the background-position-x property:

```
<!doctype html public "-//W3C//DTD HTML 4.0
Transitional//EN">
<html>
<title>background-position-x Example 1</title>
<style>
div.fixed-length {background-image: url(test-
image.jpg); background-position-x: 0 px; height:
140 px; width: 400 px; font: large Arial, Helvetica,
sans-serif; color: navy}
div.percentage {background-image: url(test-
image.jpg); background-position-x: 50%; height:
140 px; width: 400 px; font: large Arial, Helvetica,
sans-serif; color: navy}
div.negative-value {background-image: url(test
image.jpg); background-position-x: -100 px; height:
140 px; width: 400 px; font: large Arial, Helvetica,
sans-serif; color: navy}
code {font: large Arial, Helvetica, sans-serif; color:
navy; background-color: white}
</style>
</head>

<body>
<p>
<div class="fixed-length">This image is positioned
using <code>background-position-x: 0
pixels</code> (so it appears as it would normally
be tiled).</div>
</p>
<p>
<div class="percentage">This image is positioned
using <code>background-position-x:
50%</code></div>
</p>
<p>
<div class="negative-value">This image is posi-
tioned using <code>background-position-x: -100
pixels</code></div>
</p>
</body>
</html>
```

As this example shows, it is also possi-

Continued on page 95

WHAT'S NEW

Parhelia-512 graphics accelerators debut

Matrox Graphics Inc (www.matrox.com) has unveiled the first line of graphics boards based on its Parhelia-512 GPU. The company says new features in the Parhelia include a full 256-bit DDR memory interface, partial compatibility with Microsoft DirectX 9.0, and advanced multi-display computing capabilities.

The 2D and 3D multi-display functionality makes these adaptors ideal for desktop publishing, Web design, software development, digital photography, video editing, and gaming, according to Matrox.

The Parhelia adaptors are full-height ATX boards with two DVI-I connectors integrated on the bracket, which allows for a wide variety of display outputs. The boards come bundled with three cables/adaptors: a DVI-I to dual HD-15 cable; a DVI-I to HD-15 adaptor; and an HD-15 to S-video and composite cable.

The Matrox Parhelia graphics boards will initially be available with 128 MB of DDR RAM. The retail packaged version has an estimated price of US$399 and are expected to be available in July. Matrox says 64 MB and 256 MB versions will be available by fall.

—TCP Staff

Continued from page 58

music production software. The company, based in Hamburg, Germany, is best known for Logic, which is used by more than 200,000 musicians around the world, according to an Apple press release.

Emagic will operate as a wholly owned division of Apple. And, though Emagic currently develops software for both Mac and Windows platform, Apple says Windows-based product offerings will be discontinued at the end of September.

—TCP Staff

Glucose monitor integrated with PDAs

In June, TheraSense Inc. (www.therasense.com) received approval from the U.S. Food and Drug Administration to begin marketing a new tool for diabetes management: a glucose monitoring system that is integrated into a Handspring Visor PDA.

The FreeStyle Tracker is an expansion module that slides into the Springboard slot of any Visor. After putting a dot of blood on a test strip, the strip slides into the FreeStyle Tracker and analyses the blood, giving a readout on the PDA screen.

TheraSense says the tool not only allows patients to test their glucose levels, they can graph and chart the results over time, review carbohydrate food lists to track their food intake, and create reminders about testing or dietary choices. The system also gives doctors a more accurate time-stamped progression of the patient's glucose levels.

TheraSense does distribute diabetes management products in this country but there was no information at press time on when it plans to distribute the FreeStyle Tracker in Canada.

—TCP Staff

Creo releases Six Degrees trial version

Vancouver, B.C.-based Creo Inc. (www.creo.com/sixdegrees) has released a free 30-day evaluation version of its Six Degrees software.

The email-driven productivity tool automatically connects and displays related messages and files, allowing users to quickly navigate through projects, according to Creo. The developer says Six Degrees updates in real time, and does not make users change the way they work or store their files.

The software underwent external beta tests in both freelance and corporate environments, and in a range of industries and educational environments. Six Degrees operates on Mac OS X (with Microsoft Entourage X) and Windows 2000 and XP (with Microsoft Outlook).

The full version will ship in July and will be available for an introductory price of US$99.

—TCP Staff

Adobe ships InCopy 2.0

Adobe Systems Inc. (www.adobe.com) has announced the release InCopy 2.0, copy editing software that is integrated with the company's professional layout application, InDesign.

The software for writers, editors, and copy fitters at magazines and newspapers is designed to help manage and streamline the editorial process. InCopy 2.0 includes support for XML, enhanced editing tools such as dynamic spell check, a built-in thesaurus, fast text substitution and table creation, and an improved interface for working on multiple views of a story simultaneously. Because InCopy and InDesign share the same XML structure, stories created in InCopy can be imported directly into InDesign.

InCopy is available through the Adobe's system integrator channel. Pricing is based on individual installations.

—TCP Staff

Improve your swing with GPS

iGolf Technologies (www.igolfgps.com) has released a new application for use with a PDA/GPS device, which it claims will significantly improve a golfer's skill level and playing ability.

The software, iGolfgps, gives golfers accurate distance measurements—from the golfer's ball to the front, centre, or back of the green—from any location on a course. The software supports the Magellan GPS receiver and Palm OS-based PDAs from Palm, Sony, and Handspring. The iGolfgps interface inlcudes a scorecard for up to four players.

The company says the combination is an affordable alternative to golf cart mounted GPS products.

A release from iGolf says its software "can provide accurate distances on any golf course throughout the world." However courses do have to be mapped/surveyed first to work with the system. The California based company will be adding course information to its Web site database, which users can download. If a favourite course is not in the database, users can map it themselves with the system in less than 90 minutes, according to iGolf.

—TCP Staff

Canadians travel more with PDAs than partners, study finds

Fifty-five percent of Canadians travel with their handheld computer more often than their partner, according to the results of survey on PDA etiquette released in June.

The survey—conducted by Toshiba Information Systems Group (www.toshiba.ca) to coincide with the launch of its Pocket PC line in Canada—offers insight into handheld habits. Habits revealed in the survey:

- 71 percent use their handheld computers while flying in Canadian skies,
- 60 percent have used their handheld computers on the golf course,
- 51 percent use their handheld computers while schmoozing at social engagements,
- 19 percent have used their handheld computers to impress a prospective date,
- When asked about the most interesting place they have used their handheld computers, 11 percent listed the beach while an equal number considered the washroom to be the most interesting place to have used handheld computers.

Media Profile and Toshiba Canada ISG surveyed 415 Canadians through email across Canada and at various locations in downtown Toronto, Ont. in April 2002.

—TCP Staff

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MSN.ca studies keyboard generation

By Andrew Moore-Crispin

It's not the death of the English language, but rather the birth of a new form of communication, at least in the opinion of MSN ca and Neil Randall, a professor with the English department at the University of Waterloo in Waterloo, Ont

What started as a way for geeks to communicate online using acronyms and emoticons has become an accepted language for the 'keyboard generation," with abbreviated phrases like IMHO (in my humble opinion) and the more familiar LOL (laughing out loud) creeping into everyday communication according to Lingo Online, a study by MSN.ca and Randall.

The keyboard generation moniker isn't confined only to the younger generation though, "anyone using a computer on a day-to-day basis seems to be incorporating some kind of online language," and hence is a part of this demographic, says Donna Hindson, a marketing manager with MSN.ca.

The study asked 1,000 Canadians between the ages of 16 and 54 how they communicate online and offline, and if the English language is being forgotten in favour of an abbreviated writing style, which Randall says is an unprecedented hybridization of writing and speech

The Lingo study suggests that online language has gained more acceptance with the wide adoption of messaging programs like Microsoft's Instant Messenger—which was used by 81 per cent of the study's respondents.

When sending instant messages, time is of the essence to maintain conversation flow, so online language is being adopted out of necessity, Randall says

"Language has to adapt to suit culture," and this is just the latest evolution, he says. Randall notes that several of the acronyms are now listed in reputable dictionaries.

The online language is, for the most part, a creation of younger generations, and Randall says he was surprised by the fact that its use has spread across all age groups. Despite this, a generation gap is apparent

> "Anyone using a computer on a day-to-day basis seems to be incorporating some kind of online language," and hence is a part of this demographic.

The survey asked people to give the meaning behind some of the more common abbreviations found in online messages, and while 86 percent of respondents aged 16 to 19 correctly answered that LOL stands for laughing out loud, that number fell to 60 percent among respondents aged 20 to 34, and further to 28 percent of those 35 or older The numbers fall across all age groups for some of the more obscure references.

The survey also found discrepancies between age groups with the way respondents choose to communicate online.

Of those 20 years or older, 100 percent said they use email when online, but use of instant messaging seems to be confined mostly to younger people. Of people aged 35 and older, only 31 percent said they used instant messaging while online, compared to 86 percent of those age 16 to 19

While online language can be seen as the next evolution, Randall says it won't replace typical spoken or written English, and that the keyboard generation still understands the value of "traditional" English

The Lingo Online study supports this observation, as computer users seem to see email as a more formal mode of communication and data suggests that users are much less likely to use abbreviations when corresponding via email.

—CanadaComputes.com

Telus Mobility launches national 1X network

By Megan Johnston

Telus Mobility has started rolling out what it is calling Canada's first "national" 1X wireless network.

At a press conference in Vancouver to announce the new service on June 3, Telus Mobility 's B.C. vice-president Neil Cusati also introduced the Velocity Wireless PC Card solution and a new 1X phone.

Cusati said the new service offers speeds of 40 to 60 Kbps under typical conditions, and up to 144Kbps under ideal conditions

Eventually, this CDMA-based network could transfer data at rates of up to 2 Mbps, he said.

Existing cellular networks have a maximum speed of about 14.4Kbps, making next generation services such as 1X the first over which wireless multimedia Internet access is truly practical.

Other Canadian wireless network providers include Bell Mobility, which is also CDMA-based, while Rogers AT&T and Microcell's Fido are GPRS-based networks.

Initially the Telus Mobility 1X service is available in Halifax, Québec City, Montréal, Ottawa, Toronto and Southern Ontario, Winnipeg, Edmonton, Calgary, Vancouver, and Victoria Telus Mobility says it plans to extend its reach in Canada and into the U.S. (through a roaming agreement with Verizon) by the end of the year.

To make use of 1X, Telus Mobility introduced two hardware solutions: the Velocity Wireless kit, which bundles a Sierra Wireless AirCard 555 network PC Card with Internet services (such as email and Web space), and the LG TM 520 phone. The PC Card can be used with a Windows laptop or a PDA (with a PC Card adapter).

The phone can also be used with a laptop or PDA to access online data wirelessly, but requires a connection kit.

The LG TM-520 is $249 without a service contract (the price drops depending on length of service contract).

The 1X monthly service fee starts at $30 for 5 MB and up to $100 for unlimited usage. (Because CDMA is packet based, users are charged based on amount of data transferred rather than air time.) For pricing on the Velocity Wireless kit, contact one of Telus Mobility's Data Solution Channel Partners

Corporate clients with a mobile workforce are a key market for the 1X service, and to reach it Telus Mobility has partnered with enterprise software developer Citrix and Hewlett-Packard Canada.

In addition to developing services and all-in one mobile solutions, Telus Mobility says these high-profile alliances provide additional channels for marketing its service

See "Wireless world slowly emerging" in the May issue of *The Computer Paper* for an overview of wireless services and devices in Canada. ❑

IE CSS extensions. Part 8

Continued from page 91

ble to set a negative value to background position-x (and background-position-y). In this case, the negative value tells the browser to start tiling the image beginning 100 pixels "in" to the left side of the image.

Both background-position-x and background-position-y also have specific named values as well. background-position-x can take on left, center and right; background-position-y can take top, center and bottom.

These values behave slightly differently than the percentage and length values—in that they do not refer to a coordinate within the image, but how the background image is initially positioned within a Web element containing the background image. So a value of right tells the browser to put the first background image on the right-hand side, and begin tiling leftward and down from there. A value of bottom tells the browser to put the initial background image at the bottom of the element to tile up from there.

The following code example shows how the three values for background-position-x can be used:

```
<!doctype html public " //W3C//DTD HTML 4.0 Transitional//EN">
<html>
<head>
<title>background-position-x Example 2 (left, center and right values)</title>
<style>
div.left {background-image: url(test-image.jpg); background-position-x: left; height: 140 px; width 400 px; font: large Arial, Helvetica, sans-serif; color navy}
div.center {background-image: url(test-image.jpg); background-position-x: center; height: 140 px width: 400 px; font: large Arial, Helvetica, sans-serif, color: navy}
div.right {background-image: url(test-image.jpg), background-position-x: right, height: 140 px; width 400 px, font: large Arial, Helvetica, sans-serif, color: navy}
code {font: large Arial, Helvetica, sans-serif, color: navy; background-color: white}
</style>
</head>

<body>
<p>
<div class="left">This image is positioned using <code>background-position-x: left</code> (the default setting) </div>
</p>
<p>
<div class="center">This image is positioned using <code>background-position-x: center</code></div>
</p>
<p>
<div class="right">This image is positioned using <code>background-position-x: right</code></div>
</p>
</body>
</html>
```

There's one other little trick you have to know about if you intend to use these properties—ensure that you are using the proper <!doctype> statement.

When using background-position-x or background-position-y make sure you do not use the standard XHTML <!doctype> declaration—these properties will only work when the document is set as a transitional or frameset HTML 4.0 document (i.e.<!doctype html public "-//W3C//DTD HTML 4.0 Transitional//EN"> or <!doctype html public "-//W3C//DTD HTML 4.0 Frameset//EN">). If <!doctype> is set to a strict HTML 4.0 or XHTML 1.0, it will "turn off" when viewed under Internet Explorer 6.0, as it has the ability to process the contents of a Web page in accordance to the <!doctype> setting.

IE CSS extensions

This list shows all of the Internet Explorer CSS extensions, listing them in the order in which they first appeared in various releases of the browser.

Internet Explorer 4.0
filter (while first introduced in this version, many new values were tacked onto this property in later versions of Internet Explorer)

Internet Explorer 5.0
accelerator
behavior
border-collapse
bottom
direction
ime-mode
layout-flow
layout-grid
layout-grid-char
layout-grid-line
layout-grid-mode
layout-grid-type
line-break
overflow-x
overflow-y
right
ruby-align
ruby-overhang
ruby-position
table-layout
text-autospace
text-justify
word-break

Internet Explorer 5.5
background-position-x
background-position-y
layout-flow
scrollbar-3dlight-color
scrollbar-arrow-color
scrollbar-base-color
scrollbar-darkshadow-color
scrollbar-face-color
scrollbar-highlight-color
scrollbar-shadow-color
text-autospace
text-justify
text-kashida-space
text-underline-position
word-wrap
writing-mode
zoom

Internet Explorer 6.0
min-height
text-overflow

Other Internet Explorer extensions

While this concludes our look at the extensions to CSS available in recent versions of Internet Explorer, there are certainly more available.

For a full list of CSS values (standard CSS properties and extensions added to the browser) go to: msdn.microsoft.com/library/default.asp?url=/workshop/author/css/reference/css_ref_entry.asp. ❑

Next Time. Mozilla extensions to CSS

Keith Schengili-Roberts welcomes any comments, suggestions, or HTML tips you may have. You can email Keith at robertsk@rogers.com. His book on CSS published by Prentice Hall, *Core CSS* (ISBN 0-13-083456-4) is available in bookstores.

Taking GPRS for a test drive

Continued from page 90

115Kbps using its compression software. I did see this in demonstration, and even saw streaming video using that configuration, but I was unable to repeat that experience on my own notebook.

The quality of this connection varies tremendously depending on the quality of the overall cellular signal. In places where weak cellular signals made mobile phone calls difficult, the GPRS data connection was also poor. In places where I could make very clear and highly audible voice calls, the GPRS signal was also strong and stable.

This means that GPRS is only a solution for those who live in areas where the underlying PCS provider already offers good service. But I guess that's kind of obvious.

Our second setup was for data service only, using a wireless PC Card modem plugged into a notebook or handheld computer to access GPRS. Using the $525 Novatel Wireless PC Merlin G100 card, I was also able to establish a good connection to the Internet at average speeds of around 56Kbps.

The PC card option offered several advantages. For one thing, I could use it in both my notebook computer and my Compaq iPaq handheld computer. The drivers and the modem connections software installed easily and I was able to get up and running quickly.

I found that the GPRS card was particularly good for doing wireless email. I did find, however, that it tended to be rather slow when I wanted to use it for Web browsing. This was particularly true on the iPaq, which I suppose was not doing as good a job of caching the Web pages as my Hewlett Packard Pavilion notebook.

One piece of advice I would offer anyone considering the use of GPRS as their primary method of mobile Internet connection would be to set your email software to leave attachments over a certain size on the server.

I was caught out a couple of times when people sent large attachments. On a 56Kbps connection, they can considerably slow downloading of your email. It's best to wait until you have a DSL or cable connection before downloading large attachments.

I have to say that the roaming coverage Microcell offered its GPRS service was excellent and I suspect this will be the key to its success with GPRS. I used it in Vancouver, Toronto, Orlando, and Seattle. Within the next six months, users will also be able to roam on GPRS networks throughout Europe, Australia, and many other countries. That's because GPRS is based on GSM standards.

Microcell currently has an "introductory offer" flat-fee price of $50 per month (which includes U.S. roaming) for one year, available only to those who sign up before Aug. 31, 2002. For that fee, these early adopters will get unlimited usage. After that, customers will pay for the service on a "per byte" basis (i.e., the more data you receive and transmit, the more you pay).

So if you want to sample wireless email and Web browsing, you may want to think about getting started now. ❑

Taking a tablet PC out for a spin
Continued from page 74

keynote for some time now.

One of the key design goals of the Tablet PC was usable handwriting recognition—in other words, it had to be highly accurate. But, handwriting could not be the only method of input.

Thus, in practice on the Acer unit, you can type with a keyboard, do handwriting recognition on the screen, use voice recognition, or simply write on the screen and leave the information as ink. These choices are designed to allow users to decide how they want to use the Tablet PC at any given time.

On the Acer unit, you can type with a keyboard, do handwriting recognition on the screen, use voice recognition, or simply write on the screen and leave the information as ink.

The approach to handwriting recognition is particularly interesting. Microsoft recognized that previous attempts to introduce technology similar to the Tablet PC—such as the many pen-based computers of the early 1990s—largely failed due to poor handwriting recognition. The most memorable of these was Apple's Newton device, the failure of which was viciously lampooned in a series of *Doonesbury* cartoons that had the hapless device mangling everything that was entered into it.

By throwing an army of smart people at the problem of handwriting recognition, Microsoft has come up with technology that appears to be highly accurate. Not only will it recognize handwriting that is written in a small space between lines, but it is also designed to recognize handwriting that is sideways, or even written in a circle.

Probably the cleverest element of the Tablet PC though, is that it recognizes the value of leaving information as ink. Included with the Tablet PC is an application called Journal. Microsoft Journal allows you to write on a screen that resembles a simple lined pad of paper, with the difference being that you have almost an unlimited number of pages on your pad.

You can write notes on this pad to your heart's content and when you're finished, you can then turn those notes into editable text or take the diagrams or pictures you have drawn and quickly turn them into high quality drawings that could be used in presentations or business documents.

These journals can also be indexed based on the recognized text underlying the handwriting. This means you have a whole new way of quickly being able to find handwritten notes.

And as I said earlier, the Tablet PC is not just about handwriting. It is also designed for voice recognition data entry. This entire article was dictated to the TravelMate 100 Tablet PC using a headset and the Windows XP Tablet PC built in voice recognition software.

Voice recognition is a natural fit for the Tablet PC because there's nothing more natural than wanting to walk around a little as you formulate your thoughts. It's not very easy to do that when writing or typing. But with voice recognition, you can pace up and down your office or cubicle and entrust your best thoughts to the care and safety of your Tablet PC.

Of course, there will be times when you want to use a keyboard and a mouse. I tried, for example, to put together a few PowerPoint presentations using the Tablet PC and pen. It was frustrating and fiddly. So I just flipped the screen around, plugged in a mouse and keyboard, and finished the job very quickly.

I guess what will really make or break the Tablet PC is the extent to which software developers create applications that really leverage the uniqueness of this platform. At the Tablet PC reviewers' workshop in Seattle, Wash., in June, Corel showed off an amazing drawing application that really made the most of the fact that you could draw directly on the screen with a vast array of very powerful drawing tools and a pressure sensitive digital pen. Pressure sensitivity means that when you hold the pen for a longer time in a particular spot it will release more on-screen "ink," mimicking the operation of a standard ballpoint pen.

Other areas of innovation for the Tablet PC are likely to come from the fact that the design supports built-in wireless communications capabilities. The Acer model I tested included built-in support for 802.11 wireless networks, providing me with full access to the Internet and my home network (where I have an IBM wireless access point installed).

This wireless support means you have the full power of the Internet, all its applications and all its content wherever you are. As a result, I have taken to reading the morning paper on my Tablet PC, by having it propped up on the breakfast table and scrolling through all the news of the day as it comes in live through my wireless connection.

The Tablet PC also makes a fantastic platform for reading electronic books. The Tablet PC software ships with the Microsoft Reader utility, so I could carry a number of books with me as I traveled around, without the added weight of physical books. More importantly, it was much more like the experience of reading a book then I'd typically get using my notebook computer.

Nobody really knows where the Tablet PC will end up being most useful. At the reviewers' workshop, Bill Gates spent a few minutes with us talking about how he uses the Tablet PC.

He told me that it has actually replaced his PDA because he no longer needs both a notebook computer and a PDA. The Tablet PC offers all the advantages of both, except that it is a little big to put in your pocket.

Several other analysts suggested a future in which PDA functions that don't make sense to use on a Tablet PC would migrate down to cell phones, while the remaining PDA functions would reside in the Tablet PC.

The only thing I know for sure is that Microsoft is going have a fight on its hands when it comes time to reclaim the Tablet PC I have been reviewing. I can't remember what I've had as much fun reviewing a new product. ❑

Office update includes smoother text
Continued from page 74

train and the track. That information can then be used to calculate metal fatigue and predict track failure.

In a factory setting, RF ID tags can give very precise information about goods that move out of the warehouse. When combined with global positioning system (GPS) devices, these tags can store and transmit information about where they are at all times—which could be useful in transporting high-end vehicles or expensive equipment, for example.

Yet another application comes from the health care sector, where some patients require constant monitoring. Enter the Digital Angel, an RF ID tag attached to medical sensors that would continuously report the vital signs and location of a patient, while allowing that patient more privacy and independence.

RF ID tags could get small enough to be taken as a "sensor pill" that would report back on conditions inside a patient's body.

Researchers also report that these RF ID tags could get small enough to be taken as a "sensor pill" that, after swallowed, would report back on conditions inside a patient's body.

Crude versions of RF ID tags are already in use for some military applications and have been reportedly used in Afghanistan to detect and report motion in combat areas.

Looking further out, Accenture suggests that these tags could sit in a field to report on acidity of soil, can be woven into expensive materials to report on their current state (combined with stress sensors in the propeller of a plane, turbine, or submarine, for example).

Researchers at the French facility also said RF ID tags could be built into money, allowing authorities to more easily trace cash and detect whether or not it is counterfeit. ❑

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HP ready to launch 50 new products

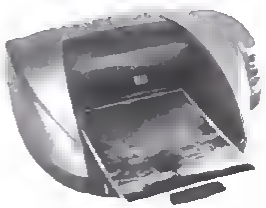
Calling it the biggest rollout of consumer products in Hewlett-Packard's history, representatives from HP Canada Ltd. announced the company will be introducing more than 50 printing and imaging products over the next six months. They got the ball rolling at a June 25 event at HP Canada headquarters in Mississauga, Ont. by unveiling three new printers and two flatbed scanners.

Among the new printers announced is the Deskjet 5550 which uses 4,800 dots per inch (dpi) print heads, Photoret IV (the next generation of HP's image smoothing technology) and a six-colour ink system. The printer also uses a newly developed ink and paper combination, which will give an estimated image permanence of 80 years. Look for a review of this printer next issue.

Ralph McNeil, head of HP Canada's Imaging and Printing Group, said there are a number of consumer and small business trends driving the digital market, including the fact that people want access to images like personal digital photos everywhere they happen to be, and they want to do more things in less time.

From a business perspective McNeil said companies big and small are shifting to a digital workflow. Among the technology trends driving the digital imaging market are the huge uptake in Internet use, and the fact that digital imaging products such as cameras and scanners are getting better and cheaper while becoming easier to use.

McNeil said HP has strengths in this area including its number-one position in terms of worldwide market share in photo printers and scanners.



The Scanjet 3570c is one of two new scanners HP has announced. It offers 1,200 dpi scanning resolution and 48-bit colour depth. It comes with a transparency adapter for scanning 35 mm slides and negatives. The 3500c is similar, but without the transparency adapter.

A second wave of four digital cameras and one photo printer was announced July 15. Now at the top of HP's digital camera line is the Photosmart 720 a 3.3-megapixel model. The camera has adopted SecureDigital cards for removable memory, which are still not common on digital cameras but have the advantage of being smaller than other popular memory card formats—they are about half the size of a SmartMedia card. The camera also has a feature called InstantShare, which allows the user to email images directly from the camera once it is docked to an Internet connect device like a personal computer.

HP has scheduled other printer and scanner products to be announced in late July and throughout August and September.

—David Tanaka

Amazon.ca sparks criticism from Canadian booksellers

By Andrew Moore-Crispin

Sharp criticism came from some Canadian booksellers after Amazon.com announced its long expected entrance into the Canadian marketplace with the launch of Amazon.ca in late June.

Indigo Books and Music chief executive officer Heather Reisman and Todd Anderson of the Canadian Booksellers Association blasted the online retailer's plans, saying its foray into the Canadian market violates federal ownership laws.

Amazon.com founder and chief executive officer, Jeff Bezos maintains that the move to a Canadian site using Canadian distribution and prices is a good one for publishers, authors, and consumers alike, and adheres to Canadian law.

"Amazon.ca will not only serve Canadians, but will also export Canadian products all over the world, increasing the visibility and reach of Canadian writers and artists," Amazon.ca representative said after the announcement.

Indigo currently has about 70 percent of the Canadian market share, though there is no word on how that is divided between online and in-store sales.

Either way, Indigo likely has the most to lose from Amazon.ca's debut.

Amazon.ca will use Canadian distribution channels, but has no employees in Canada, a technicality that may allow them to skirt Canadian ownership rules like the Investment Canada Act. The act states that any non-Canadian starting a business venture in Canada must submit to a review by the federal government to determine the potential benefits for Canada.

Amazon.ca said in a release that the company is exempt from the Investment Canada Act, as it does not require approval of companies that have no locations or employees in Canada, and Amazon.ca has neither.

The release went on to say Reisman's call for government intervention is a "smokescreen to protect her own vested interests."

Orders coming out of Amazon.ca will be packaged in a Mississauga Ont. warehouse, and shipped through an offshoot of Canada Post, a Crown corporation—something that further enrages critics.

According to a report from Internet research company IDC, 75 percent of online consumers originate from six countries. Until recently, Amazon.com operated in five of them, and now Canada makes six.

Canada is Amazon.com's biggest export country, so the move to a Canadian site is a natural, Amazon.ca says.

Amazon.ca says the new site boasts 1.5 million books, CDs, videos, and DVDs, and has editorial content in both French and English.

—CanadaComputes.com

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Nokia releases next-gen Communicator

Nokia's 9290 Communicator has finally been launched in Canada, and will be available for use with Microcell's Fido GPRS network. The phone is a single-band model, operating on the 1,900 MHz frequency, which means it won't work in as many areas as dual- or tri-band phones (it will be limited, for the most part, to North America).

What makes this phone exciting, however, is that it's also a handheld computer: the hinged device opens up to reveal a clamshell-style organizer with a 4,096-colour 640x200-pixel TFT screen on one side and a mini-keyboard on the other.

While the screen isn't touch-sensitive, as with other PDA-enabled phones, it has a cursor control button for navigating the screen and a series of buttons along the top of the keyboard and the side of the screen that allow for easy maneuvering through the menus.

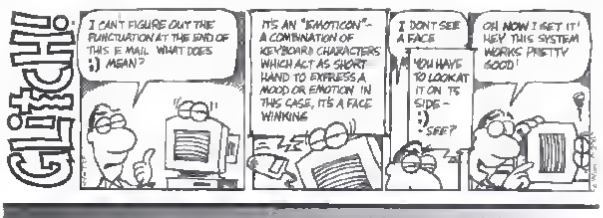
The handheld computer portion uses the Symbian operating system (which regular readers will remember is the OS also used in Psion handhelds) and Java. The browser is WAP 1.1 and xHTML compliant, and is capable of displaying most Web pages the way they were intended to be seen, graphically speaking, instead of converting everything to a text-readable format or squashing the graphics to fit a square screen. Selecting links is not obvious without reading the manual, but you'll pick up navigation fairly quickly.

Nokia 9290 Communicator
From Nokia, www.nokia.com
Estimated price: $999

The biggest problem most users will have with this phone is the orientation of the phone keypad and the earpiece. While most phones have the two on the same side, the 9290 Communicator places them on opposite sides, which means if you're accessing voicemail and need to use the number pad you have to flip it around each time you want to make a selection, or you'll have to learn how to use the number pad sight unseen.

Despite the unit's awkwardness, it's still a nice little device, thanks largely to the excellent screen, which allows graphical browsing right on your handset.

—Sean Carruthers



Mid-career crisis?
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TechXNY Report

Panasonic unveils new DVD line

By Sean Carruthers

NEW YORK—Panasonic has long been a proponent of rewriteable DVD technology, and the DVD-RAM format in particular. The first day of TechXNY saw the announcement of some new Panasonic products making use of the DVD-RAM technology, all of which will be available in the fall.

The first product announced was its third generation DVD Recorder, known as the DMR-E30, which will be available at retail sometime in July for a suggested retail price of US$800. The DMR-E30, designed for use in the living room with an entertainment centre, will handle either DVD-RAM or write-once DVD-R media, which can hold a maximum of six hours of video per side. (DVD-R discs, at 4.7 GB, are one-sided, while double sided DVD-RAM discs can be flipped for an additional six hours.)

The product features Progressive Scan, as well as Time Slip functionality, which allows users to watch the beginning of a show that hasn't finished recording. The DMR-E30 also allows

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you to watch one program while a different one is being recorded

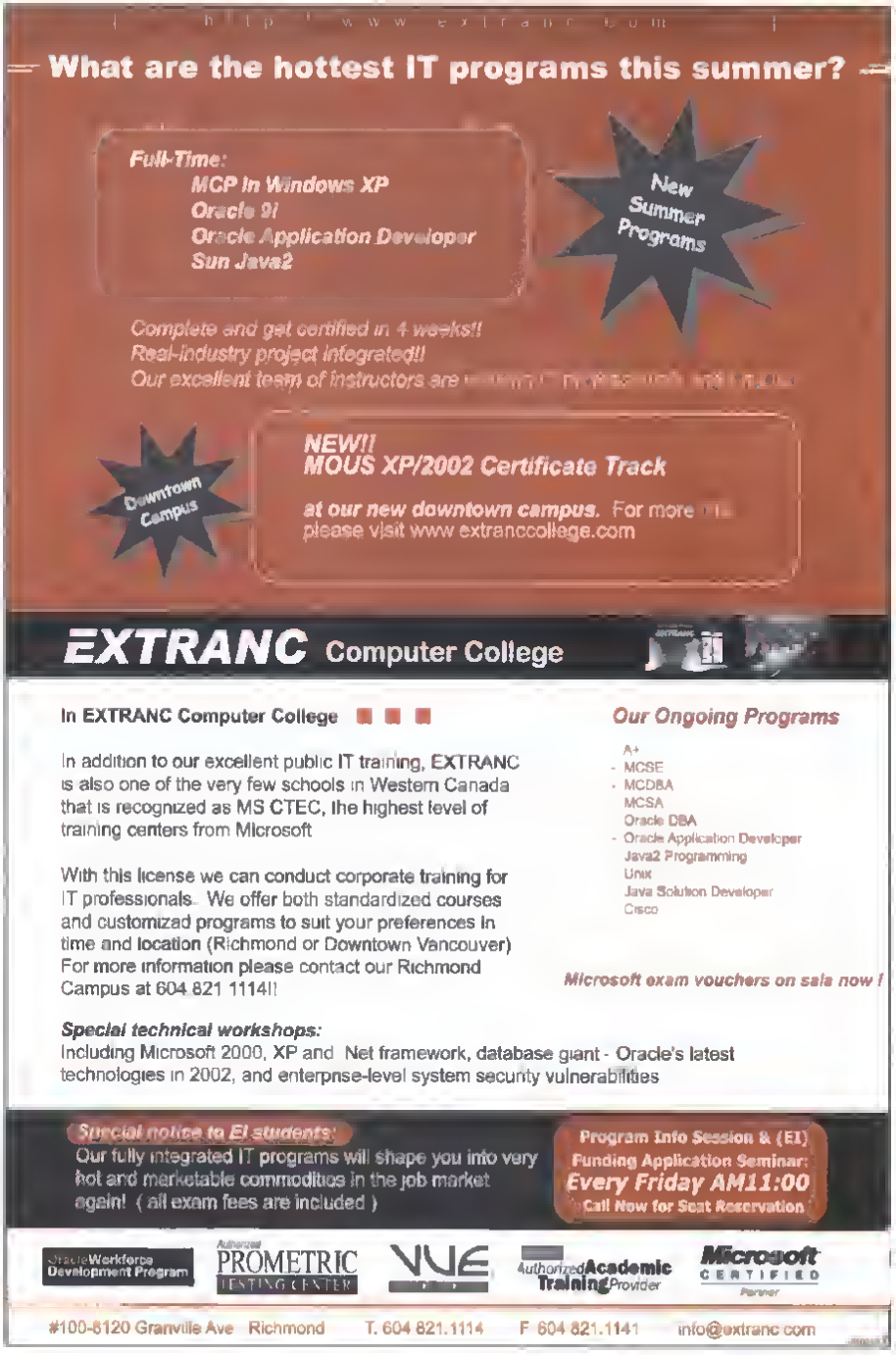
The second living room product is the DMR-HS2, which adds a 40 GB hard drive inside the case This hard drive serves several purposes including longer recording time than recordable DVD media (up to 52 hours of video in EP mode), the ability to edit content for mastering back to DVD media, and something known as "relief recording," which starts recording the video to the hard drive when space on the removable media accidentally runs out

This model also features a FireWire (IEEE 1394) slot for transferring video directly from your DV (digital video) camcorder, and a PC Card slot for transferring still images to the hard drive or DVD media. The DMR HS2 will have an estimated price of US$1,200 and is scheduled to hit shelves in October

The third and final product introduced was the VDR-M20 DVD camcorder Though Panasonic was beaten to the punch by Hitachi's announcement last month of its newest DVD Cam, this is a new product for Panasonic This camcorder will use 8 cm DVD RAM or DVD R media for recording, though only the DVD-RAM discs will support on camera editing. The camera will link to a PC via USB though it's expected (as with the Hitachi camera) that those with compatible DVD drives on the PC will find it far easier to just take the media out of the camera and drop it into the PC's drive The VDR M20 will hit the streets in September, with a price point of US$1 000.

Also joining the lineup of new products is the forthcoming DVD Burner II Multi Drive, which will read and write a number of formats, including DVD RAM, DVD R DVD RW, CD R, and CD-RW, as well as handling playback of standard formats like DVD ROM and DVD Audio The drive, designed for use inside a PC is expected to be available for under US$500 sometime in October

Panasonic also noted that there will be a drop in the price of DVD recordable media, which will make its newly announced products even more attractive DVD-RAM discs will be available in three-packs and DVD R media in five packs, bringing the price as low as US$7 99 per DVD-RAM disc and US$5.99 per DVD-R disc. ❑



Manager gets mice to market

By Sharlene Myers

In the time between the production of a product and its purchase by a customer, the product marketing manager has the most influential role. From providing input into how a product is developed and packaged, to pricing, promotions, and where it is placed on store shelves, the position requires a variety of skills and carries a lot of responsibility for a product's success or failure.

Christopher Wolfe has been a hardware marketing manager with Microsoft Canada for nine months, and recently took time out to speak with *TCP* about the varying demands of his job. Following is an edited version of that conversation.

TCP: *Did you always want to be a hardware marketing manager?*

CW: Actually, my moving into this role was an interesting transition. I have an engineering background as well as a degree in finance, so not necessarily the background that the usual marketing manager has. Usually they have a commerce background with some marketing experience.

I was looking for a financial analyst role when I got hired into Dell computers as a product manager for their desktop and notebook lines. That's how I made the transition to marketing.

A lot of the marketing manager and product manager roles require a large degree of analytical skills, because you are responsible for the revenue and margin that your products are bringing in, so you need to have a good understanding of finance and the impact that your products have on the company's [profit] and [loss].

Tell me about a typical workday for you.

I don't know if there is one, but [laughs].. Looking after the hardware product lines—mice, keyboards, and gaming devices—you're responsible for a whole spectrum of responsibilities. Actually, anything and everything to do with [Microsoft] hardware in Canada, I'm responsible for, so I get pulled into a lot of different things.

My core responsibilities, though, when it comes to the mice and keyboards and gaming device lines, would be positioning the products in the marketplace: working with our retail accounts [and] our account team to put the best product plans together, so that when you walk into a Future Shop or a Staples you see our product displayed properly with the right pricing, the right promotion, and the right positioning so consumers understand which product is best for them. That's what I do on a day to day basis.

Now there's a lot of tactical stuff that goes along with that, all the way from just making sure the product gets on the shelf, so working with operations, both here in Canada and in the U.S. where the goods come from; doing analysis on the Canadian marketplace to see where the trends are occurring are wireless mice bigger or smaller, are prices increasing or decreasing on average; and then ensuring that fits into your plans.

Do you spend a lot of time in meetings?

Not that much. I probably have the typical workday of eight or nine hours—there are busy and slower seasons with everybody's role—but I typically have about three hours of meetings a day, which isn't too bad. It gives me a lot of time to really study my product line and

Career Profile
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Continued on page 105

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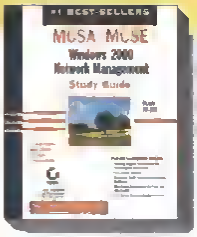

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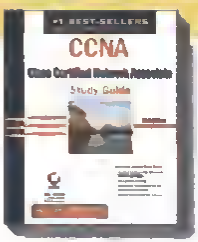

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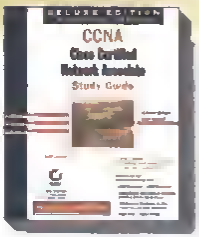

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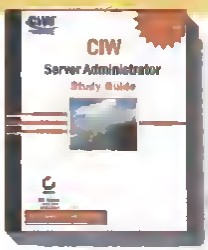

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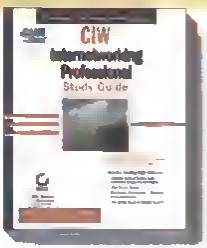

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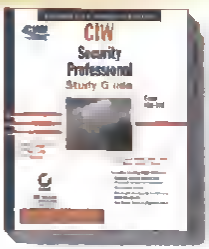

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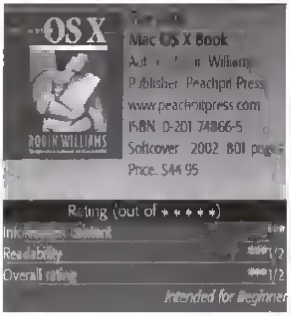
It's the friendliest OS X book, but 'little' it ain't



The "little" in the title of this Mac OS X book is a farce—at more than 800 oversized pages, I'd hate to think what a Large Mac OS X Book would look like.

Having said that, author Robin Williams (not to be confused with the comedian) is an acclaimed, award-winning author who has written such classics as *The Non-Designer's Design Book* and the original *Little Mac Book*.

Because of that, this book has some real advantages over others on the same topic.

It is easily the best organized and the most clearly written—I'd even say the friendliest—of the beginner's level Mac OS X books I've seen.

With a myriad of screenshots and a lucid writing style, it would be hard for a neophyte Mac OS X user to go wrong. That it was written by an experienced user of the operating system comes through in the way she tackles typical problems users might run into.

Of all of the books on OS X I've read, this is perhaps the best for the rank beginner. It's the book I would get for my Mom.

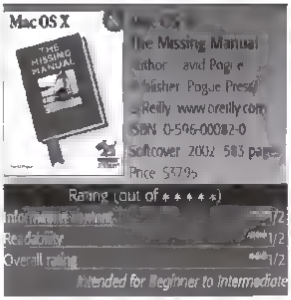
While it claims to go into some more advanced functions, only OS X newbies and the semi-experienced will get much out of the book.

It would be wrong to complain about the book based on size alone, but titles in Williams' earlier Little Mac Book series were known for their simplicity, concision, and for fitting a lot of truly useful information into a compact text.

Though this new edition tries to harken back to the days of simpler operating systems, something has been lost. I would have been happier with a smaller book that focused on getting users up and running, quickly, with the new OS. It's a good book—better than average, in fact—but "little" it ain't, and that's too bad.

—Keith Schengili-Roberts

Solid Mac OS X guide goes beyond basics



David Pogue has proven his worth as a computer book writer, creating the deservedly successful Missing Manual series as well as a half-dozen of the more notable For Dummies series. Perhaps more importantly for Mac users interested in this book, he is a former *MacWorld* columnist and author of *Mac OS 9: The Missing Manual*. Pogue has a particularly good basis for knowing how OS X differs from its predecessors.

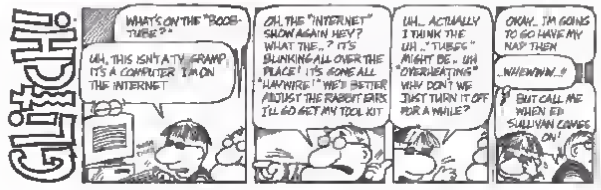
The book covers all of the fairly basic topics found in most of other books on OS X, getting to know the new layout; using the programs that come standard with the operating system; dealing with font settings and more. But this book goes beyond the basics, dealing with things like simple networking, using the Unix shell that lies at the heart of the new OS, and even a rather tentative chapter dedicated to "hacking" the OS.

There's enough here to get the OS 9 and wholly new Mac OS users up and running quickly with OS X, and enough depth to make it a useful reference. One particular feature I liked was the "Where'd It Go?" dictionary, which lists where and under what name Apple has put all pre-OS X features.

While this book arguably has more "meat" to it than most, I was hoping for something that got more into the nitty-gritty aspects of the OS, providing more than just a cursory look at things like the Unix shell.

A good—though not likely to be the best—book on OS X.

—Keith Schengili-Roberts



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Manager gets mice to market
Continued from page 102

the marketplace

What do you like best about your job?

I like the diversity of the role. Being a product manager, you get to kind of dabble in everything. A big chunk of my responsibility is [in] the consumer marketplace—that's where the bulk of my revenues come from. That being said, there's a large OEM (original equipment manufacturer) business with the system builders, so I do work with them as well. I work with distribution. I also work with the corporate side; the large corporations need mice and keyboards as well.

So I get to touch all aspects and I guess all sizes of organizations, which is good because it allows you to learn more, instead of just being purely corporate focused or purely retail focused.

Also there's a broad range of people I deal with and customers I deal with, [and] within the role there's a broad range of skills needed—analytical skills, creative skills, project management skills. You're not staring at spreadsheets all day, you're not in meetings all day. It's a good mix.

What do you like least?

That's a very difficult question. I wouldn't say "what do I like least," I'd say, "what isn't the most exciting," but it's some of the routine things, things that you do day in and day out, and they're more of just the bookkeeping items. They don't really challenge your thinking, but they're critical to get the job done, things like paying the bills. The more administrative, tactical things are not the most enjoyable, but every role's got those aspects.

What do you do to keep yourself up to speed in your industry knowledge, your job skills and your product knowledge?

Microsoft's a great company in that they support us across the board in developing ourselves both personally and career wise. So just little things like getting subscriptions to all the computer and tech magazines. *The Computer Paper*, *Toronto Computes!*, *PC Magazine*, *PC World*. We read them on our breaks, so we can keep up to speed on the latest products and trends. We have relationships with big research companies as well... the standard computer IT research companies that also provide a lot of insight into what's happening in the industry. And just the newspaper. I find is a good place to find out what's happening because usually they know what's going on before everybody else.

In terms of my skill set, beyond industry knowledge, it's just keeping up to speed with the latest marketing trends through seminars or courses or whatnot. So if you look at the year, I'm probably in two or three weeks a year just learning new things, challenging old concepts.

What would you consider to be the most important skills someone would need to do your job?

I would have to say understanding the product's place in the market as well as the organization. That could be financial, or from a customer point of view, or from your account's point of view, be it a retailer or a corporation. It is a jack-of-all-trades job, so you need to be a well rounded individual to do this role versus a role like, say a financial analyst, which is very numbers-oriented.

[In] this you do need strong analytical skills, but you also need a strong creative and project background.

What are the biggest challenges you would expect to face in your position over the next couple of years?

The biggest challenges would be to continue pushing the limits of creativity, trying to do new things, and getting new breakthroughs in your product lines. Mice and keyboards have been around for quite a while. There's always new variations and new technologies coming out, but it's just pushing the barriers of what customers you can get on board, how you position the products so customers that weren't customers in the past recognize the benefits of a better input device.

When you're not working, what's your favourite way to spend your time?

Depends on the season. In the summer I like to get outside, play volleyball or go bike riding, go to the cottage. I'm a computer person, so I do enjoy tinkering around on my computer, be it software or hardware, and setting up wireless networks, that type of thing. Into winter it's more indoor stuff—reading, watching movies, those types of things. ❑

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Computex Report

What's here is coming everywhere

By David Tanaka

Wall-to-wall technology: More than 2,000 booths representing 1,000-plus exhibitors crowd the show floor at Taipei's multi-venue Computex in early June

TAIPEI, Taiwan—Computex is one of computer technology's biggest events. The annual show, held this year from June 3-7, is primarily an event for buyers (or traders, as they're referred to by event organizers) who come in droves from all parts of the globe. According to show organizers, the final attendance tally was approximately 24,400, a 4.6 percent increase over last year. The top three visitor countries were the U.S., Japan, and Korea.

Just over 1,000 companies were registered as exhibitors. Most were from Taiwan, although an international exhibitor section took up one quadrant of the main hall. The U.S., Korea, and Hong Kong each had their own pavilion, and a fourth area was devoted to other international exhibitors. International or domestic, there's a good chance that the products exhibited in the more than 2,000 booths spread across three locations will show up on a sales shelf somewhere in the world.

The show covers a broad spectrum of IT products from components to finished goods. Products include both business equipment like bar code scanners as well as computer and consumer electronics.

While some exhibitors mount the kind of massive showcase areas common to trade shows like Comdex or PC Expo, most have standard booths, so the density of exhibitors on the floor is high. The show is organized into zones, though, which makes it easier to skip whole sections that are not of interest. Here's a few items that caught our eye.

K8 motherboards

Taiwanese manufacturers own the motherboard market. A report in *DigiTimes* magazine states that Taiwan's top four motherboard makers—Asustek, ECS, MSI, and Gigabyte—are responsible for more than half the world's supply of motherboards.

At Computex, motherboard and add-in card makers took over most of Hall 2, and most of the major companies were displaying boards for the new AMD K8 processor, which is scheduled for an October release.

David Bennett, spokesman for Micro-Star International Co. Ltd. says the MSI K8 motherboard uses the VIA VIAK8HTA chipset, and will come with USB 2.0 support and 5.1 sound onboard. FireWire (IEEE 1394) connectivity will be an option, as will a choice of onboard Bluetooth or WiFi wireless LAN connectivity. The board will have three memory slots supporting DDR333 SDRAM.

Bennett also pointed out MSI's N18 Ultra ABIL Athlon board which he said is the first motherboard to include Bluetooth onboard.

Bluetooth? Yes, there was some evidence at the show that Bluetooth may be building a head of steam. In addition to the usual Bluetooth modules, we came across a couple of LAN solutions based on Bluetooth, including the BlueCute access point from a newly minted company called Albatron.

Albatron started life in the mid '80s as a TV manufacturer and slowly branched into monitor and computer peripheral production. At the beginning of this year, it took on the new name, Albatron and a new focus: IT-related products including flat-panel displays, motherboards, and connectivity products like the BlueCute.

Marketing director Darryl Chan said BlueCute is intended primarily for residential wireless networks, where Bluetooth's 10 m range won't be a limiting factor. He says one advantage of Bluetooth is its relatively low power requirements, making it an ideal wireless

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Handhelds, accessories abound

Speaking of handhelds, bring up the subject of PDAs in Canada and only a few brands come to mind, but more may be on the way as a number of new devices were on display at the show.

Acer, already a known brand in North America, has two one based on the Palm OS, and the other on the 2002 version of Windows Pocket PC The Windows for Pocket PC 2002 based n20 and n20w premiered at this show Both use Intel's PXA 250 processor, come with 64 MB of RAM, and use a Sony Memory Stick slot for removable storage (the n20 also has an accessory slipper with PC Card and CompactFlash slots)

Dimensionally the n20 comes within a whisker of Toshiba's svelte new Pocket PC device The n20w is thicker and heavier, because it has built in 802 11b wireless and a bigger battery

The Palm based s10 was announced last fall, and Acer says it is the first Chinese Palm OS device Alas, on returning to Canada, we learned from Acer that it has no immediate plans to release either platform in North America

Eten Information Systems Co Ltd (www.eten.com.tw) has incorporated a dual band (900/1,800 MHz) GSM/GPRS phone into its latest InfoTouch P600 model, which uses Windows Pocket PC 2002 The unit is powered by a 206 MHz StrongARM processor, has 64 MB of onboard RAM, and has a 65,000 colour screen It also has MultiMedia Card and Type II CompactFlash slots for expansion. This brand is relatively unknown in North America, but the company says it has sold about three-quarters of a million InfoTouch handhelds in Taiwan and China since 1997

One company that seemed to have support from many handheld hardware makers is Penbex Data Systems (www.penbex.com), which has developed its own operating system, Penbex OS We've seen Penbex on this side of the ocean exhibiting at Comdex. The company says the platform will support GSM wireless telephony as well as consumer-oriented multimedia applications like MP3 playback.

A supporting cast of handheld accessories—keyboards, cases, camera attachments, etc.—was also there A case in point was an innovative folding keyboard from Benq (formerly Acer Peripherals). The nearly full size keyboard is built in three sections. The two outer parts of the keyboard slide over the centre part for compact storage

Interestingly, when we returned to Canada, a news release from Belkin was waiting for us, announcing that it would be selling it as the G700 Portable PDA keyboard It will retail for around $100, and will be available for most Palm models some Sony Clé models, and the Toshiba e310

Internet appliances

It might be a product category best suited to Asia (where dimensionally small computers generally do better than they do in North America), but there was a special pavilion devoted to IA (Internet appliance) devices, with 15 companies exhibiting there. In addition, other exhibitors throughout the show also showed IA devices

Many are based on Microsoft CE/Pocket PC operating system and are tablet style units. A case in point is the e-DigiNote Pen Tablet from APlux Communications (www.aplux.com). The unit has an 8.4-inch TFT screen that can be viewed in portrait or landscape mode It comes with Pocket Internet Explorer and wireless connectivity via expansion cards (the unit has Type II PC Card and Type II CompactFlash slots)

Similarly, EB2000 from Epower com Technology (www.epower-tech.com) uses Windows CE 3 0 and is architecturally similar, although it has a 10 4-inch display

Continued on page 108

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Manager gets mice to market
Continued from page 107

The fast and the frigid

You want fast? Then you need to chill, literally. On display at the Asus (www.asus.com) booth was what the company (formally Asustek Computer Inc.) calls the fastest PC in the world. The system uses an Asus P4B533-E motherboard and an overclocked 2.4 GHz Intel Northwood processor. The secret to keeping the CPU from vapourizing when pushed to 3,000 MHz or higher is a little refrigerator posing as a computer case.

The case is called the VapoChill, from Asetek Inc. of Norway. Inspecting the normal looking tower case reveals a small finned heat exchanger (similar to what you'd see on a window air conditioner) where the power supply fan usually sits. Inside, sitting on the CPU, is a block, presumably the chiller, and insulated plumbing. The person I talked to at the booth could not fully explain how it worked, or how much extra power it required, but it had all the makings of a standard air conditioner: heated fluid flows from the chiller to the finned heat exchanger, where it is cooled, then cycled back to the chiller.

Asus, the self-proclaimed "king of overclocking," has a number of solutions to keep CPUs cool, including a system called Q-Fan, which varies the speed of the cooling fan according to what is needed, resulting in a quieter and more energy efficient system. Asus also incorporates overheating protection that cuts power to an overclocked CPU before it is damaged.

According to *DigiTimes*, Asustek Computer is the leading motherboard manufacturer in Taiwan, and shipped 15 million motherboards in 2001.

Computex Report

Motherboards are easy: GigaByte message

TAIPEI, Taiwan—Gigabyte wants active and potential PC do-it-yourselfers to know that installing a motherboard is not difficult. This was the main message delivered by Bill Hong, vice-president of Gigabyte Technology Inc's PCBA Group during a briefing here at Computex.

The luncheon meeting, called Tech Forum 2002, gave the Taiwan based motherboard manufacturer the opportunity to show what it is doing for the ease-of-use cause. One of the signature design elements of Gigabyte motherboards is Dual BIOS, which improves reliability through redundancy. Hong said that, in addition to viruses a BIOS can be damaged through improper flashing. The implication was that if users somehow damaged the BIOS during an update gone wrong the Dual BIOS feature gives them a second chance.

Gigabyte has also developed some utilities to make it easier to adjust motherboard settings. They include EasyTune, which Hong described as a Windows-based platform tuner that provides control of extensive hardware settings through a friendly graphical interface. Another utility, Ezflex, makes it easier to select the correct multiplier when installing an AGP video card into the AGP slot. Likewise, V-Tuner monitors various hardware settings and provides overclocking utilities. Gigabyte even includes a utility called Face Wizard, that allows a user to create a personalized bootup screen.

On the subject of overclocking, Hong said Gigabyte neither encourages overclocking, nor warranties damage that may result from the practice. But, he said "we cannot limit what end users can do. Overclocking is not illegal and we get lots of requests on it. We do not encourage it but we know that's what users want."

Miles of motherboards

After the briefing, Gigabyte bussed a group of journalists to one of its five factories for a plant tour. In Ping-Jen, about an hour's drive out of Taipei, is the 45,000 sq. m Nan-Ping plant. The eight storey structure might be mistaken for an office tower, but in fact only the top floor is for administration with the remaining floors devoted to aspects of the manufacturing process. Opened in October 2000, the plant employs approximately 1,730 people, and can pump out about 800,000 motherboards and 250,000 network and VGA cards a month.

The Nan-Ping plant includes 17 automated surface mount lines, along which all of the small surface mounted components are inserted by machine. The plant also includes 10 DIP lines, where workers physically add the larger components and PS/2, USB, and other peripheral connectors. The plant also has nine testing and eight packing lines. At the end of the process we wandered through stacks of cartons stamped with their final destination, among them a couple of recognized names of PC distributors in Vancouver and Toronto.

Gigabyte was founded in 1986. It has one additional plant in Taiwan, and three in Mainland China. It currently employs 3,900 people, including about 80 outside of Taiwan and China. The company says its revenue last year was approximately US$833 million.

—David Tanaka

Commodity digital cams coming

If what is being shown at Computex points to what might soon be coming to store shelves in Canada, expect a flood of low-cost digital cameras. Several manufacturers, some recognized in Canada, had a variety of models on display.

In 2000, we looked at Aiptek's (www.aiptek.com.tw) PenCam I, which was about the size of a thick felt-tipped pen—10x3x2 cm (4.9x1.2x0.8 in.). The company has developed several lines since then, including the follow up Pen Cam II, a 1.3-megapixel version, and models with a more traditional camera body style.

Microtek (www.microtek.com), long known in Canada for its scanners, was showing several digital camera prototypes, including one that is smaller than a business card and about 1.25 cm (0.5 in.) thick, and comes on a keychain. While the model on display was a non-working sample, Andy Hu, director of the company's digital camera operations showed us a working model Microtek is manufacturing for a Japanese com ➤

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Japanese teams triumph in RoboCup

While many sportswriters lamented the scant attention North Americans paid to World Cup soccer action, few if any allocated a single line to RoboCup, a concurrent soccer event also held in Japan and Korea in June.

On the official Web site (www.robocup2002.org), RoboCup is billed as "an international research and education initiative" with a goal to, "by the year 2050, develop a team of fully autonomous humanoid robots that can win against the human world soccer champion team."

This year's competition was the sixth annual event and was held in Fukuoka, Japan, co-sponsored by Busan, Korea. Participants comprised 193 teams from 30 countries, and for the first time, the competition included biped humanoid robots.

Tournament participants were divided into five leagues: simulation, small size robots, medium-sized robots, four-legged robots and humanoids. In addition there were two other competitions: RoboCup Rescue, a search and rescue competition; and RoboCup Junior, for younger students.

In a press release announcing its participation in the mid-size RoboCup event, Philips Electronics outlined some of the technologies needed by the robots to play soccer. These include colour recognition so robots could discern the orange ball and propel it toward a yellow or blue goal; kinematics to enable the robots to turn 360 degrees and move around the field, and wireless Ethernet to allow the four robots on the field to communicate with each other.

The Philips Cyber Football team, which was created by a group of 40 Philips employees in their spare time, finished fourth in the mid-size league. First place went to Eigen, a team from Keio University in Japan; followed in second place by WinKIT, from Kanazawa Institute of Technology; and Osaka University's Trackies2002 team in third place.

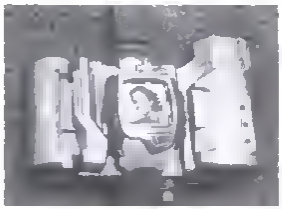
More details and a complete list of winners is available on the Web site, as is information on past tournaments and winners and future tournaments.

—Sharlene Myers

What's here is coming everywhere

Continued from page 108

pany. When we were in Tokyo a few days later, we saw these cameras in a number of retail outlets selling for the equivalent of $120.



DXG Techology Corp. (www.dxgtech.com) showed what it claims is the first colour wrist cam. The VGA-resolution camera has 2 MB of built-in memory, and will download images to a computer through either a USB connection or wirelessly via infrared. Company spokesman Aaron Chen said the product may be available in North America (well at least the U.S.) by Christmas, and will cost approximately US$200. The unit is also a digital watch.

One company we may hear more of in the future is Skanhex Technology Inc. (www.skanhex.com.tw), which had a full line of digital cameras, including a 4.1-megapixel model, on display. Spokesman Kenzo Tseng said Skanhex is five years old, but has only been making digital cameras for the past year. Previously, it made film cameras on an OEM basis for companies like Minolta and Kodak.

Tseng said the company has 300 employees in Taiwan and about 600 in Mainland China. Its 14 production lines in China combined can produce about 40,000 units a month.

The high-end 4.1-megapixel unit uses CompactFlash for storage and includes a 3X optical zoom. Tseng said it would be ready for distribution in September, but so far, the company has not formalized plans for North American distribution. ❑

Mid-career crisis?

Check out "Managing an IT Career" in the September issue of TCP. Distributed beginning Aug. 14.

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PC Expo Report

Innovation still apparent at smaller show

By Sean Carruthers

NEW YORK—PC Expo has long been New York's biggest annual technology event, though that may soon change. This year's PC Expo, which ran June 25-27, was rolled into a larger event known as TechXNY which also featured a Web services expo and a dedicated DV Expo for those working with digital video. Though this year's event was smaller than previous shows, there were still a number of interesting things happening, and some innovative and interesting products both on and off the show floor. Following are highlights.

Focus on DV

Digital video has become such a big part of the consumer electronics and computer world that a separate hall was set aside to hold this year's DV participants. Hardware companies like Sony, Canon, and Sharp showed off new cameras, while Matrox, ADS, and Adaptec presented capture cards and peripherals. Software companies, such as Adobe and Roxio, were also on hand to talk up their newest capture and editing packages.

Tablets take off

Though the tablet PC concept has been around for a while, it's never taken off with consumers. Microsoft is betting that that's about to change, with the announcement of the new Windows XP Tablet PC Edition operating system, which brings Tablet PC-specific features to Windows XP. This combination may be what it takes to bring users to the tablet form factor—previous versions had a more scaled back version of the operating system, like Windows CE or Pocket PC for Windows, as opposed to a full version of Windows. This new operating system not only has all of the features of XP, it adds the ability to write on the PC screen using a special stylus. A number of major hardware vendors have announced support for the OS, and some—like Acer Peripherals, Fujitsu, Toshiba, Viewsonic, and VIA—were showing off Tablet PC prototypes that will hit the market as soon as the OS officially ships, sometime near the end of 2002 (possibly in November).

Continued on page 116

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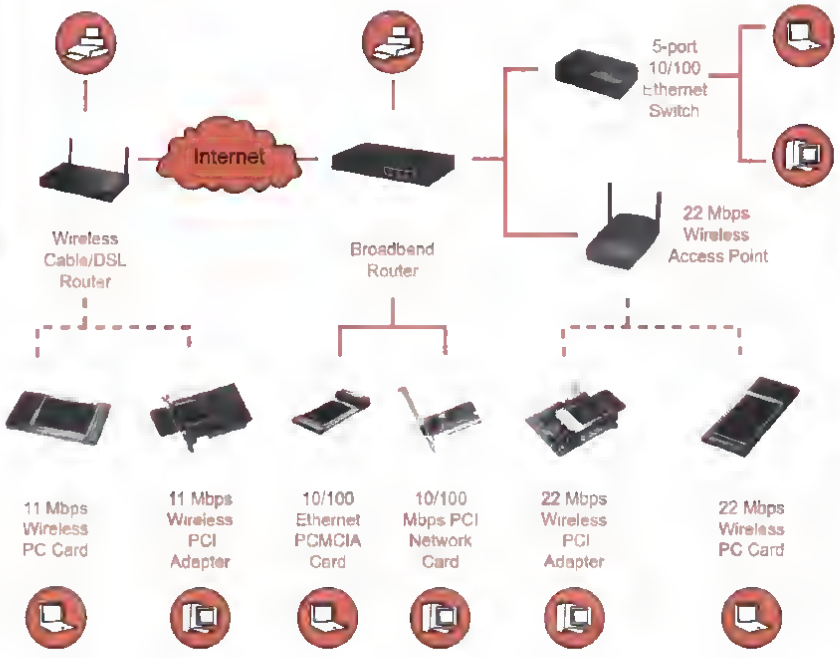

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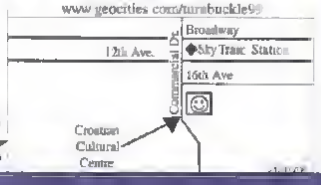

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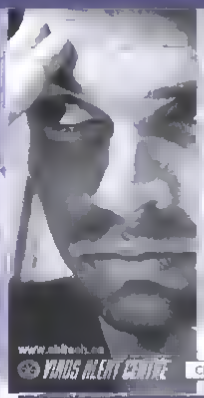

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Innovation still apparent at smaller show

Continued from page 110

Xerox wins the race

Though Xerox's accounting procedures caused quite a stir immediately following PC Expo, there was also a bit of excitement at the show itself. On a stage set up at the Xerox booth, right in the middle of the show floor, onlookers watched as Gil Hatch (president of Xerox Office Systems Group) demonstrated the newly announced 45 page per minute (ppm) Document Centre 545 printer. Given a series of tests set up by an independent third party, the printer outperformed three other printers with higher rated speeds, most notably a Ricoh printer rated at 105 ppm. Xerox also announced the first printer for the North American market to use Emulsion Aggregation toner (developed at the Xerox Research Centre of Canada, in Mississauga, Ont.). Previously, the toner was only available in the Asian market through the Fuji-Xerox partnership.

Xplay hooks the iPod to your PC

Apple's iPod MP3 player turned a lot of heads when it was introduced—only problem was, it would only work with a Mac, leaving Windows users out in the cold. Mediafour Corp. (mediafour.com/xplay/) has come to the rescue with Xplay, software that allows users with Windows 98SE, Me, 2000, and XP systems to hook an iPod up to their PC. The software treats the iPod like an external hard drive and allows users to tweak their ID3 data tags using a dialogue on the PC.

AG Neovo toughens up flat panels

Flat-panel monitors are also big news these days, but you probably don't want to put a standard flat-panel onto your desk if you have small children in the same house, for fear of damaging the pricey peripheral. AG Neovo's new line of monitors may change your mind, though: both the M Series and X Series of monitors have a protective glass panel mounted over the delicate screen that can protect it even from fairly sharp blows. Despite having the extra layer in front of the screen, display quality is still excellent, and the viewing angle remains very wide, at 160 degrees (horizontal and vertical). Both monitors feature TV input, and the M Series also incorporates multimedia speakers. The M Series starts at US$589. The 17-inch version of the X Series runs around US$999, while the 15-inch version checks in at a lower price point. ❑

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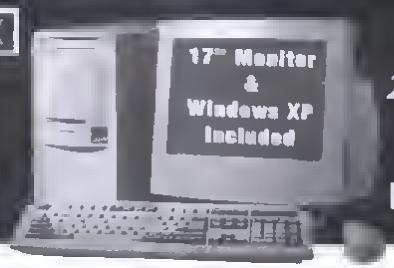

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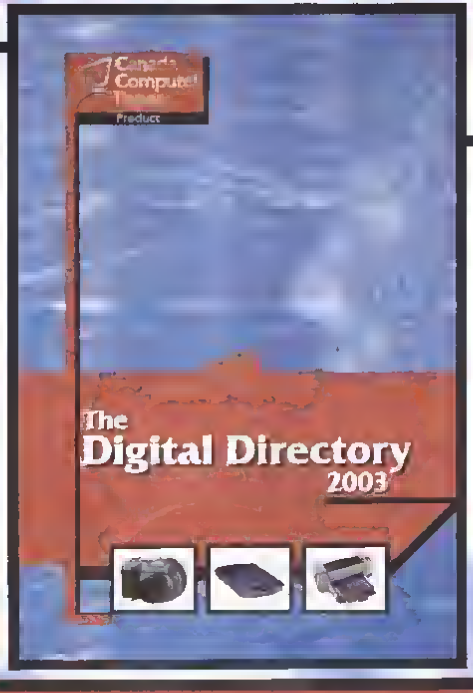

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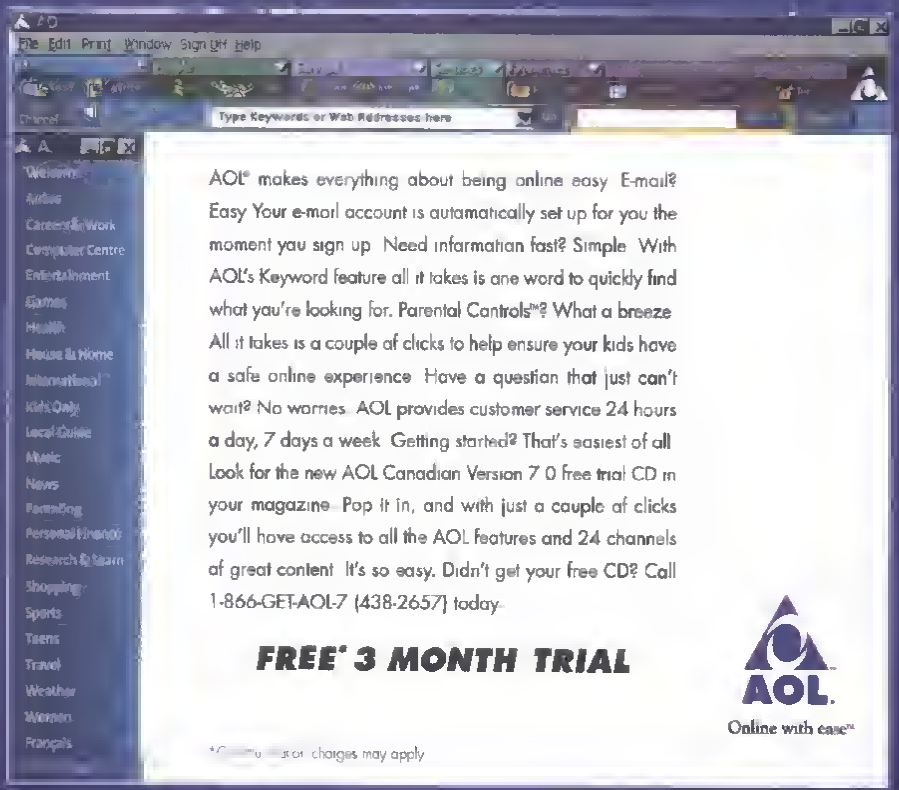

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